

FUNDAÇÃO GETULIO VARGAS
ESCOLA DE ADMINISTRAÇÃO DE EMPRESAS DE SÃO PAULO

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I need help! I can't afford it: The interplay of credit beliefs, anxiety, impulsive buying and risky indebtedness behavior in predicting Brazilians' financial preparedness.

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Campo do conhecimento: Administração Mercadológica.

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SÃO PAULO

2018

Braga, Farah Diba M. A. Abrantes.

I need help! I can't afford it: the interplay of credit beliefs, anxiety, impulsive buying and risky indebtedness behavior in predicting Brazilians' financial preparedness / Farah Diba M. A. Abrantes Braga. - 2018.

75 f.

Orientadora: Tania Modesto Veludo-de-Oliveira.

Tese (doutorado) - Escola de Administração de Empresas de São Paulo.

1. Crédito direto ao consumidor. 2. Consumo (Economia). 3. Comportamento do consumidor. 4. Dívidas. I. Veludo-de-Oliveira, Tania Modesto. II. Tese (doutorado) - Escola de Administração de Empresas de São Paulo. III. Título.

CDU 330.567.2

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Data de aprovação:

09/03/2018

Banca examinadora:

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Dedico este trabalho a meus pais, Wanderley (*in memoriam*) e Valdiza, irmãos - Fabricia, Fabianne e Wanderley Filho – a meus sobrinhos amados, Tios Silveira, Fátima Silveira, Abrantes e Ana, e ao amigo do coração, Marco Flávio. Por todo apoio e referência de dedicação ao trabalho e de vida.

AGRADECIMENTOS / ACKNOWLEDGEMENT

When I applied for my Ph.D., I expected it would be a four-years intense journey. However, I did not expect it to be as hard as it was. Hard indeed, but a journey of immensurable knowledge that made me not only a better professional but a much better human being. I have learned so much more than what I ever expected to learn, and for this I am grateful.

This journey was only possible and productive because I could rely on some amazingly great people, who I am incredibly thankful. First and foremost, I want to thank my advisor Tania Veludo-de-Oliveira who was a source of great support and inspiration. Tania, it has been an honor being your Ph.D. advisee. Second, I want to thank you, Manoj Thomas, my advisor while at my doctoral stage at Cornell University. Working with you was one of the most significant challenges of my life, and it provided me with inestimable learning. It has been an honor working with you. Without all the knowledge I had from Tania and Manoj, this dissertation would not have been the same. To you both, Tania and Manoj, I am forever grateful.

I also would like to thank my committee members: Felipe Zambaldi, José Afonso Mazzon, and Diogenes Bido for their time, interest, and helpful comments. Thank you to FGV-EAESP for providing me with the best Ph.D. course I could have in Brazil. I learned a lot from many great professors. In particular, Delane Botelho, Juracy Parente, Eliane Brito, Rafael Goldszmidt, and Mateus Ponchio.

I could not go through it without the support of great friends and friends I have made along the journey. I was fortunate to have support and to find out that I genuinely had friends who cared about me. I would like to mention them all here. Marcos Flavio, thank you, for your friendship and for believing in me. You are the best, my friend! Thank you for all your support and care, Renata Galhanone, Sinara Polycarpo, Sonia DeCoster, Llipe Guimaraes, Patricia e Alvaro, Anna Karina, Didi, Ana Paula (Mary), Dani (Pitot), Stella Maximo, e Lu Camy! I further would like to thank my colleagues at FGV – EAESP FEA-USP, and ESPM. Each one of them had put some effort contributing to my journey supporting me somehow, thank you Mateus Ferreira, Cristiano Amaral, Rafaela Almeida, Giuliana Isabella, Luis Pilli, Lucia Barros, Tobias Parente, Lilian de Carvalho, Genésio Vasconcelos, Carla Abdala, Caê, Benjamin, Viviane Rocha, Ricardo Limongi, Gustavo Porpino, Suzanna Battistella, Marina Gama, and Claudia Yoshinaga. Some of them I am sure will be my friends for life. Additionally, I had the opportunity to do a research stay at Cornell University, that would not have been possible without the support of great professors and friends to whom I am also genuinely thankful. Professor Lourdes Casanova, Professor Jay Russo, Felipe Silva, Anna Paula Silva, Gaurav, Sarah Lim, Shreyans, Piyush, and Annie Johnston.

I gratefully acknowledge the financial and data collection support I have received from Vidi Shopper. I would also like to thank you FortBrasil and the companies that provided me support in launching my survey in their customers' data that made my Ph.D. work possible. Furthermore, I would like to acknowledge the financial support I have received from CAPES (Coordination for the Improvement of Higher Education Personnel). Without it, the Ph.D. journey would not have been possible. Last, but not least, I would like to thank my family for all their support, and love. Special thanks to my mother Valdiza; brothers and sisters, Fabianne, Wanderley, Fabricia; in-laws, 'Cunhadinho' Mauro, 'Lindinho' Ju and Dany; and my beloved nephew and nieces, Beatriz, Marina, Maria Clara, Marcela, Mauro, Maria Eduarda and Julia. Overall, my feeling is of gratitude to have had the opportunity of experiencing this intense Ph.D. journey: thank you!

RESUMO

Os resultados desta pesquisa revelam quão importantes são os fatores pessoais (por exemplo, traços de comportamento), o comportamento de compra e crenças financeiras, na previsão do endividamento e bem-estar financeiro dos indivíduos, em comparação indicadores financeiros comumente utilizados pela academia e indústria financeira (por exemplo, renda, relação dívida / renda, sexo, idade, escolaridade). O crédito ao consumo sofreu um tremendo aumento durante as últimas décadas, tanto em economias desenvolvidas quanto nas emergentes. O Brasil, que tem uma das maiores taxas de juros de crédito ao consumidor do mundo, também experimentou uma substancial expansão de crédito, proporcionando acesso ao crédito a consumidores que nunca tiveram acesso a ele antes, notadamente aqueles do grupo de baixa renda. A literatura e experiência de outros países associam o acesso a enormes quantidades de crédito a comportamentos não ideais e ou destrutivos, como, a compra impulsiva e o superendividamento. Esse tipo de comportamento prejudica o bem-estar financeiro do indivíduo. No contexto dos serviços financeiros e da economia brasileira emergente, este projeto de pesquisa propõe o conceito de 'preparação financeira para emergências' (FPE), definido como 'o estado de um indivíduo estar financeiramente preparado para lidar com um choque financeiro'. Esta pesquisa postula que FPE é um componente crítico do bem-estar financeiro, e empregando a literatura existente propõe um modelo integrativo de causas e consequências do bem-estar financeiro. Esse modelo investiga o papel do crédito ao consumidor, atitudes monetárias, comportamento impulsivo de compra e endividamento, na previsão da preparação financeira dos consumidores para uma emergência. Empregando um método de modelagem de equações estruturais baseado em covariância (CB-SEM) para testar o modelo proposto empiricamente, este estudo descobriu que fatores pessoais, compras e comportamentos financeiros desempenham um papel fundamental como antecedentes da preparação financeira dos indivíduos. As descobertas sugerem que indivíduos que veem seus limites de crédito como parte de sua renda ou estão ansiosos em relação ao dinheiro são mais propensos a se engajar em comportamentos impulsivos de compra e endividamento. Consequentemente, ao se envolver em tais padrões de comportamento, os indivíduos enfraquecem seu estado para lidar com o choque financeiro, o que, por sua vez, pode afetar seu bem-estar financeiro. Esta pesquisa revela ainda que a crença de que os limites de crédito servem como renda não altera o comportamento arriscado de endividamento dos consumidores de baixa renda. Além disso, os resultados sugerem que o número de cartões de crédito, sexo, escolaridade e idade não desempenha nenhum papel na preparação financeira nem em nenhum dos relacionamentos do modelo. Uma explicação dos resultados e várias de suas implicações é abordada neste estudo. No geral, as recomendações focaram nos indivíduos, instituições e formuladores de políticas e na responsabilidade de cada um deles em adotar formas sustentáveis de comportamento, tais como conscientizar o uso do crédito, adotar e regular ferramentas que identifiquem melhor os traços e comportamentos dos consumidores que possam levá-los, e eventualmente a sociedade como um todo, a um bem-estar financeiro sólido.

Palavras-chave: bem-estar financeiro, preparação financeira para emergências, serviços financeiros, crédito ao consumidor, endividamento, equação estrutural.

ABSTRACT

The findings of this research bring out how relevant are personal factors (e.g., traits), buying, and financial behaviors in predicting individuals' indebtedness and financial well-being, if compared to predictors of debt and determinants of credit limits commonly used in academia and the finance industry (e.g., income, debt/income ratio, past credit usage behavior, the number of credit cards, past debt behavior, gender, age, schooling, marital status). Consumer credit has undergone a tremendous increase during recent decades in both developed and emerging economies. Brazil, which has one of the highest consumer credit interest rates in the world, has also experienced a substantial credit expansion, providing credit access to consumers who had never had access to it before, notably those in the low-income group. Both previous experience and the literature associate the access to massive amounts of credit with suboptimal and destructive forms of behavior such as impulsive buying and over-indebtedness. This kind of behavior undermines the individual's financial well-being. In the context of financial services and the emerging Brazilian economy, this research project proposes the concept of financial preparedness for emergency (FPE), defined as 'an individual's state of being financially prepared to cope with a financial shock.' This research posits that FPE is a critical component of financial well-being and extending on previous literature framework of drivers and consequences of financial well-being, it proposes an integrative model that investigates the role of consumer credit, money attitudes, impulsive buying and indebtedness behavior, in predicting consumers' financial preparedness for an emergency. Employing a covariance-based structural equation modeling (CB-SEM) method to test the proposed model empirically, this study finds that personal factors, buying, and financial behaviors play a key role as antecedents of individuals' financial preparedness. The findings suggest that individuals who see their credit limits as part of their income or are anxious about money are more prone to engage in impulsive buying and risky indebtedness behavior. Consequently, by engaging in such patterns of behavior, individuals weaken their state to cope with financial shock, which in its turn might affect their financial well-being. This research further finds that the belief that credit limits serve as income does not change the risky indebtedness behavior of low-income consumers. Furthermore, the findings suggest that the number of credit cards, gender, schooling, and age does not play any role in financial preparedness nor any of the model's relationships. An explanation of the outcomes and various of their implications is addressed in this study. Overall, the recommendations made focus on individuals, institutions, and policymakers and the responsibility of each of these players to adopt sustainable forms of behavior, such as, building credit usage awareness, adopting and regulating tools that better identify consumers' traits and behaviors that might lead them, and eventually society as a whole, into sound financial well-being.

Key words: financial well-being, financial preparedness, financial services, consumer credit, debt, structural equation.

LIST OF TABLES

Table 1 - Grand Tour Questions.....	29
Table 2 Socio-Demographic characteristics of the overall sample.....	39
Table 3 Descriptive statistics and correlation matrix.....	42
Table 4 Cross-Validation Structural Model Outputs.....	44
Table 5 Indirect Effects.....	45
Table 6 Measurement Invariance Analysis.....	47
Table 7 Moderators' Groups/Variable Descriptions.....	48
Table 8 - Summary of the Hypotheses.....	48

LIST OF FIGURES

Figure 1 Proposed conceptual framewok.....	27
Figure 2 Results of the conceptual framework model using SEM.....	43

SUMMARY

1. INTRODUCTION.....	14
2. THE BRAZILIAN CONTEXT.....	18
3. BACKGROUND	19
3.1 Concepts and Definitions.....	20
3.1.1 Financial Well-Being and its association with Financial Preparedness for Emergency (FPE).....	18
3.1.2 Conceptualizing Risky Indebtedness Behavior (RIB).....	20
3.1.3 Consumer Credit Provided by Credit Cards and the Belief that Credit Limits Serve as Income (CLB).....	20
3.1.4 Conceptualizing Impulsive Buying (IMP).....	20
3.1.5 Conceptualizing Anxiety towards Money (ANX)	22
3.2 Hypothesis Building.....	23
3.2.1 Credit Limit Beliefs as an antecedent of Impulsive Buying and Risky Indebtedness behavior.....	23
3.2.2 Anxiety toward Money as antecedent to Impulsive Buying and Risky Indebtedness Behavior.....	23
3.2.3 Risky Indebtedness Behavior as antecedents of Financial Preparedness.....	24
3.2.4 The role of Revolving Credit Use and Number of Credit Cards.....	24
3.3 The Proposed Conceptual Framework.....	26
4. Methods.....	27
4.1 Research Design.....	27
4.1.1 Qualitative Phase.....	27
4.1.1.1 The interviews.....	27
4.1.1.2 The focus group.....	28
4.1.1.3 Preliminary qualitative data analysis.....	29
4.1.2.1 Overview of the Scale Development and Validation Procedures.....	31
4.1.2.2. The scales.....	32
4.1.2.3. Assessing the Scales.....	34

4.1.2.4. Questionnaire design.....	36
4.1.2.5. Sample and descriptive.....	36
5. RESULT.....	39
a. Structural equation modeling procedures (SEM).....	39
b. Structural Model Results.....	41
c. Multi-group analysis.....	44
6.DISCUSSION OF FINDINGS AND IMPLICATIONS.....	47
7.RESEARCH LIMITATIONS AND FUTURE RESEARCH.....	55
REFERENCES.....	56
APPENDICES.....	67
Annex 1 – Table 9 Interviews Respondents’ Profile.....	67
Annex 1 – Table 10 Focus Group Respondents’ Profile.....	67
Annex 2 - Table 11 Summary of the Constructs.....	68
Annex 3 - Table 12 - Professors, Researchers and Field Experts’ Profile.....	69
Annex 4- Table 13 Final Scale and Questionnaire Items’ Descriptive.....	70
Annex 5 - Table 14 Anxiety Towards Money – Original Scale - EFA Results.....	71
Annex 5 - Table 15 Impulsive Buying Scale	71
Annex 6 – Table 16 Propensity for Indebtedness Scale.....	72
Annex 6 – Table 17 Credit Card Company Profile.....	73
Annex 6 – Table 18 Fintech Company Profile.....	73
Annex 6 – Table 19 Vidi Online Panel Company Profile.....	73
Annex 7 – Table 20 Socio- Demographic characteristics of the sample by database.....	74
Annex 9 – Table 24 Moderation Outputs.....	76

1. Introduction

Over 2.5 billion credit cards issued worldwide (Euromonitor, 2014) have contributed to a tremendous increase in consumer credit over recent decades (Brown, Taylor, Wheatley, & Price, 2005; Kirchler, Hoelzl, & Kamleitner 2008). Consumer credit is one of the primary causes of an abnormal increase in consumer debt (Kamleitner & Kirchler, 2007; Wang, Lu, & Malhotra, 2011; Vieira, Oliveira, & Kunkel, 2016). Credit provided by credit card companies is characterized by high-interest rates (Nepomuceno & Laroche, 2017), ready availability (Gathergood, 2012), and increasingly more generous credit limits (Bethune, Rocheteau, & Rupert, 2015). Destructive forms of behavior such as over-indebtedness affect the overall wellness of many individuals negatively. In contemporary society, this abnormal increase in debt has led households into financial difficulties and even to bankruptcy, whether in developing countries (Durkin, 2000; Kamleitner & Kirchler, 2007) or in the so-called ‘emerging markets’ (Delloite Consulting, 2015; Flores & Vieira, 2014; FMI, 2013; Wang, et al., 2011). The literature relates indebtedness to lesser amounts of savings, to an increase in financial risk taking (Livingstone & Lunt, 1992), financial distress, and to a loss of psychological (Shen, Sam, & Jones, 2014) and financial well-being (Anderloni, Bacchiocchi, & Vandone, 2012; Nepomuceno & Laroche, 2017). Notably, high-levels of indebtedness prevent individuals planning and enjoying a healthy life (Brown, Taylor, Wheatley, & Price, 2005; Hoelzl, Pollai, & Kastner, 2011) and undermine long-term financial goals, thus reducing individuals’ financial well-being.

The increase of indebtedness levels has been associated with credit card usage, a phenomenon called ‘the credit card effect’ (i.e., ‘spending facilitating stimuli’ promoted by credit cards; Feinberg, 1986; Raghurir & Srivastava, 2008). This effect has been thoroughly investigated. However, preceding literature has focused on the effect of the physical differences of each payment mechanism (e.g., cash, credit card), and how they affect the consumer’s spending behavior, type of product purchased and compulsive buying behaviour (Chatterjee & Rose, 2012; Raghurir & Srivastava, 2008; Soman, 2001; 2003; Lie & Hunt, 2010; Thomas, Desai, & Seenivasan, 2011) just to give a few examples. Apart from a few exceptions such as Wang et al., (2011) and Lu, Wang, and Malhotra (2014) who investigated the use of credit limits as determinants of credit card debt;

and Soman and Cheema (2002) who examined the effect of the availability of credit on spending, to the best of my knowledge, less attention has been directed to exploring consumers' credit beliefs on spending and indebtedness behavior. In fact, overall, the studies that have investigated credit limits regarded as income have proposed this belief as an explanation of the effect of credit limits on spending and indebtedness. To the best of my knowledge, this research is the first to examine this belief as a cause of spending and debt behavior. Moreover, when investigation into credit limits took place, the measurements used were financial indicators (e.g., income, credit limit range in US\$ currency, specific credit card behaviors, etc.) (Wang et al., 2011; Lu et al., 2014), and not a self-reported behavioral measure, as this study employs. And finally, to the extent of this research, no other study has investigated how these beliefs might contribute to consumers' financial well-being. Hence the relevance of this study.

The aim of this research is threefold: 1) to explore and to provide a better understanding of antecedents of indebtedness behavior, within the context of financial services, and how it contributes to or harms consumers' financial well-being; 2) to propose a new concept and behavioral measure of an antecedent of financial well-being (i.e., financial preparedness for emergency, defined as an individual's state of being financially prepared to cope with a financial shock) (see also section 3.1.), and 3) to offer behavioral measures for concepts that have been mainly evaluated employing financial indicators (Gatherhood, 2012; Netemeyer, Warmath, Fernandes, & Lynch, 2017). More specifically, this study proposes an integrative model that investigates the role of beliefs that credit limits serve as income and anxiety toward money (Yamaushi & Templer, 1982) in predicting impulsive buying (Thomas et. al., 2011) and risky indebtedness behavior, and how this affects consumers' financial preparedness. This research thus contributes to existing literature by incorporating the role of credit beliefs and financial preparedness in the context of financial well-being. This study further adds to the literature by expanding on Brüggén, Högrevé, Holmlund, Kabadayi, and Löfgren's (2017) research, employing their framework of drivers and consequences of financial well-being to propose a comprehensive model of the antecedents of financial preparedness.

Previous studies on financial well-being have investigated the capability and probability of a household having problems with debt repayment (Del Rio & Young, 2008; Jappelli, Pagano, & Di Maggio, 2008);

the inability to engage in primary social activities, such as dining-out or traveling (Worthington, 2006) and the inability to face the monthly budget and the consequent difficulty in paying their bills (Anderloni et al., 2012). Other few concepts could be taken as similar to the one I present in this article (i.e., financial preparedness). I need therefore to clarify how my concept differs from these. First, Behling and Merves (1985) and Hershey and Mowen (2000) have investigated specifically financial preparedness for retirement. Bhargava and Lown (2006) have investigated a similar concept to ours. However, it not only did not define the concept clearly as we do, but it also employed financial indicators such as the amount of savings, money market accounts, and other funds, to measure such preparedness. Hira and Mugenda (1998) have proposed the concept of ‘financial satisfaction’ which is focused on measuring financial satisfaction. Overall, when measuring an individual’s financial capabilities, studies mostly use financial indicators (e.g., income, delinquency, income-debt ratio and debt levels, savings). My concept of financial preparedness is solely concerned with the behavior that enables individuals to cope with a financial shock (or, any financial shock, or emergencies) (i.e. the individuals. I propose a parsimonious self-reported behavioral measure to assess the minimum conditions demanded to cope with a financial shock, considered to be 1) enough money to cope with a job loss; 2) a monthly income that permits saving, and 3) the ability to deal with the expenses of financial emergencies. None of the prior measures were able to measure the construct proposed in this study. Furthermore, financial well-being and its core elements cannot be captured with objective measures alone as it may reflect other components, such as individuals’ traits and beliefs (Bruggeen et al., 2017).

Impulsive buying behavior leads to numerous problems (Nenkov, Inman, & Hulland, 2008), and the lack of financial concern (Sharma, Sivakumaran, & Marshall, 2010) promoted by this behavior may lead individuals into unwanted indebtedness which in its turn may affect individuals, their families and society's wellness. Hence, these consequences provide grounds for investigating this concept continuously. Furthermore, the psychological significance of money to individuals, as exemplified by their anxiety toward money (throughout this study it will also be called Anxiety), is known to produce suboptimal spending behavior such as compulsive consumption (Veludo-de-Oliveira, Falciano, & Perito, 2014). Nevertheless, research into this subject is still little. Thus, the relevance of investigating it further.

The following questions are addressed in this study: Why do some people get more deeply into risky indebtedness behavior than others? How do beliefs that credit limits serve as income impact consumers' risky indebtedness and impulsive buying behavior? How does anxiety toward money affect risky indebtedness and impulsive buying behavior? How does risky indebtedness behavior affect consumers' financial preparedness? What are the consequences of the interaction of credit limit beliefs, anxiety toward money, impulsive buying and risky indebtedness for consumers' financial preparedness? Are there implications for consumers' financial well-being? Finally, I address the question as to how consumers can avoid falling into suboptimal spending behaviors and risky indebtedness and be prepared for a financial eventuality. This study further addresses the implications of these findings for consumer budgeting, financial institutions and public policy on financial well-being. This research begins by describing the Brazilian consumer credit and debt context. Secondly, it defines each concept approached in the study before constructing hypotheses. There follow research procedures, sample description and results, concluding with the discussion of how specific behaviors and traits together weaken the probability of financial preparedness for any emergency.

2. The Brazilian Context

The context of this research is the emerging Brazilian economy for which debt has also been an issue of concern. In the past decade Brazil has experienced a substantial and long-lasting credit expansion (IMF, 2013; Euromonitor, 2017) providing access to credit for consumers, for some of them for the first time. The wider availability of consumer credit has had positive effects, for instance, by allowing consumption that would not otherwise have been possible, most notably among moderate-low income consumers. Many Brazilians have had the opportunity to acquire a fridge or a computer for the first time in their lives. Nonetheless, experience from other countries shows that periods of fast credit growth have often been related to increased fragilities (IMF, 2013). Among such fragilities are debt service costs, arrears, delinquency, and other strains due to high debt levels arising, notably, from credit provided by credit cards. The Consumer Indebtedness and Delinquency Report (PEIC, 2017) shows that among Brazilian households who have any debt, 25.7% are in arrears with their debt, and 9.7% (PEIC, 2017) will default. Besides, among the households in debt, 37.1% carry either high or over-debt levels (PEIC, 2017). And a remarkable 76.7% of average household debts stem from credit cards (PEIC, 2017), in contrast to United States data which show that credit card debt there represents 6% (Federal Reserve Bank of New York Research and Statistics Group / Equifax, 2016). This datum raises critical concerns. First, the fact that consumer credit provided by credit cards in Brazil implies enormously high interest rates (Nepomuceno & Laroche, 2017). Notably, in Brazil, interest rates are probably one of the highest in the world (422.5% annual percentage rate (a.p.r.), revolving credit; 161.6% a.p.r. installment credit; Brazilian Central Bank, 2017). Secondly, whereas long-term debt (e.g., debt contracted for education and mortgage) may provide long-lasting benefits throughout the individual's life, consumer credit may imply suboptimal consumption behavior (Anderloni et al., 2012) and might be associated with inadequate consumers' financial preparedness. Ultimately, this inadequacy might lead to poor financial well-being, eventually resulting in a burden for society's overall financial well-being.

3. Background

This section has three primary purposes: (1) to define each concept, (2) to review the relevant literature and (3) to explain the relationship between the concepts, thus providing adequate grounding for the hypotheses.

3.1 Concepts and Definitions

3.1.1 Financial Well-Being and its association with Financial Preparedness for Emergency (FPE).

Extant literature provides a range of definitions for the concept of financial well-being. It seems that, thus far, authors have failed to agree on an overall description. Nonetheless, lately, a significant effort to standardize this concept and to identify its core elements may be observed on the part of both academia and policymakers. Archuleta, Dale, and Spann (2013) posit that financial well-being concerns the ability to manage financial emergencies, meeting basic needs, maintaining a healthy debt level and a fair amount of savings. Based on a review of 150 research articles, the Consumer Financial Protection Bureau (2015) argues that to achieve and maintain financial well-being, individuals need to be able to absorb a financial shock, to control monthly and day-to-day expenses, meet financial goals, and have the financial freedom to make choices. Netemeyer, Warmath, Fernandes, and Lynch (2017) proposed the concept of ‘perceived financial well-being’, which is grounded in the dimensions of current and future financial conditions, specifically, ‘current money management stress’ and ‘future financial security.’ In a recent study, Brügger et al. (2017) proposed a comprehensive description of financial well-being which they define as “the perception of being able to sustain current and anticipated desirable living standards and financial freedom” (p. 229), which is the definition that this research project will adopt. Brügger et al. (2017) based their description on four key elements needed to achieve financial well-being: subjectivity, dynamicity, a given standard of living, and financial freedom. Subjectivity refers to the fact that not only income but also other personal factors (e.g., individuals’ financial knowledge), and financial and buying behaviors (e.g., budgeting, saving and impulsive buying) drive financial well-being; dynamicity relates to the fact that financial well-being encompasses current and future financial situations; third, financial well-being needs to address the ‘necessary expenses’ to

maintain a certain standard of living; and finally, financial freedom which is necessary to allow individuals to make choices without worrying about financial constraints. Grounded on the concept of Brüggen et al. (2017) of financial well-being and specifically on the ‘standard of living’ key element, this research proposes the concept of ‘Financial Preparedness for Emergency’ defined as an individual’s state of being financially prepared to cope with a financial shock. This study proposes that financial preparedness is a critical component of overall financial well-being.

As a guideline to investigate drivers of financial well-being, Brüggen et al. (2017) further proposed a framework which categorizes key elements and consequences of financial well-being. Specifically, this research investigates two of these elements, financial behavior and personal factors. Financial behavior relates to the motivating behavior that impacts financial well-being, just like any behavior that can interrupt destructive financial behavior (e.g., risky indebtedness behavior). The personal factor consists of socio-demographic aspects (e.g., age, gender, schooling, income), personal traits (e.g. anxiety toward money, credit limit beliefs), and financial practices (e.g., impulsive buying) that an individual might have that affects consumers’ financial well-being and its antecedents (e.g., financial preparedness). Most specifically, this study proposes an integrative model of ‘traits and beliefs’ (i.e., anxiety toward money and beliefs that credit limits serve as income) to investigate their role in spending behavior (i.e., impulsive buying), destructive financial behavior (i.e., risky indebtedness behavior) and its impact on an antecedent of financial well-being (e.g., financial preparedness for emergency).

3.1.2 Conceptualizing Risky Indebtedness Behavior (RIB)

Debt is associated with a series of adverse consequences and negative aspects of behavior. Past research relates debt to unemployment, to working more hours to pay bills, to depression, to poor school grades among young adults, and to an increase in school drop-out rates (Bethune et al., 2015; Hojman, Miranda, & Ruiz-Tagle, 2016; Manning, 1999; Miller, 2000; Pirog & Roberts, 2007; Roberts & Jones, 2001). High debt levels are also linked to lower self-esteem, diminished confidence in individuals’ money management skills, and elevated levels of stress (Lange & Byrd, 1998). Notably important for this study, indebtedness is associated with lesser amounts of savings and an increase in financial risk taking (Livingstone & Lunt, 1992), which weaken individuals’ financial well-being. This study addresses the concept of Risky Indebtedness Behavior as ‘a

behavioral tendency to getting into debt revealed by repetitive debts due to spending more than one can afford.’ This present author thinks it important to explain how this proposed concept is different from others. First, the behavioral measure found in existing literature investigates the ‘tendency to take on debt’ (i.e., ‘propensity for indebtedness’; Flores & Vieira, 2014); whereas our concept proposes to assess behavior that results in unaffordable debt levels and may have consequences for individuals’ overall financial wellness. Secondly, it differs from general studies on debt or over-indebtedness that employ financial indicators such as the debt-to-income ratio (Wang et al., 2011; Lu et al., 2014) and the debt delinquency rate (Gatherhood, 2012), while I offer a behavioral self-report scale.

3.1.3 Consumer Credit Provided by Credit Cards and the Belief that Credit Limits Serve as Current Income (CLB)

Credit is a useful tool used to acquire things without having to save in advance. The use of credit has become an essential part of current and standard buying behavior (Bernthal, Crockett, & Rose, 2005; Livingstone & Lunt, 1992; Norum, 2008). The fact that credit allows for immediate consumption (Hoelzl et al., 2011) encourages behavioral tendencies to immediacy. Financial services such as credit cards provide distinct types of consumer credit. ‘Revolving credit’ is a kind of credit that allows consumers to pay any amount of their credit card balance above the minimum required payment (Wang et al., 2011; Lu et al., 2014). Such a credit line provides credit limits in advance of any transaction, so there is no need for consumers to reapply for credit each time it is needed (Wang et al., 2011). This mechanism clearly facilitates consumption.

Another type of consumer credit provided by credit cards is the ‘credit limit’ itself. Past research suggests that credit limits lead consumers to experience an effect called the ‘Illusion of Income’ which refers to the belief that credit limits somehow predict or represent one’s future income (Soman & Cheema, 2002; Wang et al., 2011). This belief leads consumers into estimating budgets based on their credit limits rather than their income alone, thus fostering consumption, ultimately leading to overconsumption and debt (Wang et al., 2011; Lu et al., 2014). Soman (1999) defined a concept named the ‘Illusion of Liquidity’ as the increase in perceived available income created by the predominant use of credit cards. Extending these concepts, I propose the concept of ‘Credit

Limit Beliefs' defined as consumers' belief that credit limits serve as an extension of their regular income. This concept is different from those mentioned previously as it addresses the extent to which individuals believe their credit limits serve as their current income (and not as future income). This concept enables us therefore to detect such behavior in late life-cycle stage consumers, those already financially established, who tend not to think that there will be higher levels of future income due to professional development.

3.1.4 Conceptualizing Impulsive Buying (IMP)

While to most individuals, consumption is merely part of everyday life, to some others it has a unique meaning, a central goal in which consumers become passionately engaged (Faber, O'Guinn & Scott, 1987) to the point at which they lose control and act impulsively. Impulsive buying is a concept already thoroughly studied (Baumeister, 2002; Beatty & Ferrell, 1998; Bellini, Cardinali, & Grandi, 2017; Clover 1950; Cobb 1986; Gangai & Agrawal 2016; Jones, Reynolds, Weun, & Beatty, 2003; Meissner, 2016; Muruganantham, & Bhakat, 2013; Peck & Childers, 2006; Piron, 1991; Rook, 1987; Sharma, Sivakumaran, & Marshall, 2014; Stern, 1962; Vojvodic & Matic, 2014; Yalin, 2015; Yoon & Kim, 2016; Xiang, Zheng, Lee, & Zhao, 2016). It is, however, a concept subject to many different interpretations. Before Rook's (1987) studies, the concept highlighted the product as the only determinant of impulsive buying and did not consider personal traits to be predictors of impulsive buying. Impulsive buying involves a propensity for immediacy, it tends to be spontaneous and involve no in-depth analysis (Beatty and Ferrell, 1998); a decision taken without any reflection, a 'rapid', 'irrational' and uncontrolled consumption experience (Jones et al., 2003; Meissner, 2016; Rook, 1987; Rook & Gardner, 1993; Rook & Fisher, 1995). It usually occurs after the person feels a desire to purchase (Beatty & Ferrell, 1998). Impulsive buying is a kind of 'low-effort, feeling-based' behavior, and it has been related to a series of negative kinds of behavior, feelings, and consequences. It has been associated with the consumption of unhealthy products (Thomas et al., 2011), with low cognitive control and unstructured behavior (Sharma, Sivakumaran, and Marshall, 2010), feelings of guilt (Yalin, 2015), depression (Sneath, Lacey, & Kennett-Hensel, 2009), absenteeism and weaker job performance (Kim & Garman, 2003). Of vital importance to our investigation is the fact that impulsive purchasing comes about with total disregard for financial considerations (Sharma et al., 2010) or at any cost or consequence (Amos,

Holmes, & Keneson, 2014; Rook, 1987) and in forgetfulness of long-term goals and plans. Thus, this paper employs the impulsive buying definition that describes it as a kind of purchasing behavior that “involves getting a sudden urge to buy something without advance intention or plan and then acting on that impulse without carefully or thoroughly considering whether the purchase is consistent with one’s long-range goals, ideals, resolves, and plans” (Thomas et al., 2011, p. 127).

3.1.5 Conceptualizing Anxiety toward Money (ANX)

Money is a relevant component in consumer behavior (Yamauchi & Templer, 1982; Mishra, Mishra, & Nayakankuppam, 2006) and is most commonly seen as a ‘means’ of acquiring things. Nevertheless, although money is merely a means of exchange, for many people the emotional, psychological significance of money goes beyond its relative economic value (Hanley & Wilhelm, 1992). For instance, Wong (2010) posits that there are direct relationships between attitudes towards money and behavior. Goldberg and Lewis (1978) hold that the primary psychological meanings of money are security, power, love, and freedom. Yamauchi and Templer’s (1982) Money Attitude Scale (MAS) was the first standardized instrument to assess behavior as related to money. Tested in 1984, the MAS was hypothesized from four general areas of the psychological features of money: security, retention, anxiety, and power-prestige. Later, Yamauchi and Templer’s work was followed by Furnham’s Money Beliefs and Behavior Scale (MBBS). This paper employs the concept of anxiety toward money of Yamauchi and Temple’s Money Attitude Scale, described as the trend to view money as a source of anguish or concern (Wong, 2010). Anxiety is associated with distress and worry over money issues (Engelberg & Sjoberg, 2006). For individuals scoring high on Yamauchi and Templer’s (1982) anxiety factor scale, money is both a source of anxiety and a source of solution from anxiety (Yamauchi & Templer 1982; Roberts & Sepulveda, 1999). These individuals tend to attribute that anxiety to money, and in general, they are always troubled about not having enough of it (Wang, Liv, & Jiang, 2011).

The next section provides the grounds for our hypotheses.

3.2 Hypothesis Building

3.2.1 Credit Limit Beliefs as an antecedent of Impulsive Buying and Risky Indebtedness behavior.

The literature finds that easy access to massive amounts of consumer credit (e.g., credit limits, installment plans, revolving credit, etc.) might encourage consumers to think that their income is high, resulting in a greater willingness to use credit (Soman & Cheema, 2002), a higher propensity to spend (Soman, 2001), and in elevated levels of debt (Lu et al., 2014). Research findings associate the use of consumer credit with impulsive buying behavior (Gatherhood, 2012; Wang et al., 2011; Rook & Fisher, 1995) and overconsumption (Lu et al., 2014). Furthermore, the literature posits that the availability of money is a facilitator for impulsive buying (Nguyen, Jung, Lantz, & Loeb, 2003). Thus, it is reasonable to suppose that, since the credit limits provided by credit cards offer consumers greater availability of money, they facilitate impulsive buying behavior.

The literature relates consumer credit usage to debt (Andelman, 1998; Monthly Review, 2000; Soman & Cheema, 2002; Wang et al., 2011; Lu, et al., 2014). Chien and Devaney (2001) find that a positive attitude towards credit is a predictor of consumer credit usage (e.g., consumer credit provided by credit cards). Extant literature (Davies & Lea, 1995; Norvilitis, Merwin, Osberg, Roehling, Young, & Kamas, 2006; Norvilitis & Mendes, 2013) also finds that a student's attitude towards debt is a predictor of debt. The more positive the attitude towards debt the higher the debt levels. Since the use of consumer credit generates debt, it is fair to presume that a favorable attitude towards debt implies a positive attitude towards credit use. This line of reasoning further indicates that a positive attitude towards credit relates positively to debt. Furthermore, the literature suggests that liberal attitudes towards credit use (Livingstone & Lunt, 1992; Norvilitis et al., 2006) are connected to debt (e.g., credit card debt). According to this rationale, it seems realistic to assume that the belief that credit limits serve as one's income implies a liberal belief towards the use of credit. Hence, we may infer that people with such a belief tend to be more prone to indebtedness behavior.

Anderloni et al. (2012) posit that behavioral attitudes such as impulsiveness can influence individuals' consumption and debt decision-making; for instance, high-levels of impulsiveness are

associated with elevated levels of debt (Boddington & Kemp, 1999; Norvilitis et al., 2003). Impulsive buying is related to a tendency to immediacy, as opposed to a delaying of gratification (Beatty & Ferrell, 1998; Rook & Gardner, 1993; Thomas et al, 2011). Meissner (2016) argues that the preference for immediacy is one explanation for suboptimal behavior (e.g., risky indebtedness). Therefore, people with a tendency to impulsive behavior are more prone to suboptimal forms of behavior such as indebtedness. In support of this rationale, research conducted by Norvilitis and Mendes (2013) finds that individuals with a tendency to delay gratification have lower levels of student debt (i.e., individuals with a tendency immediacy have higher levels of student debt). I therefore, hypothesize:

H1a: Credit Limit Beliefs are positively related to Risky Indebtedness Behavior. The stronger the Beliefs, the greater the indebtedness behavior.

H1b: Credit limit beliefs are positively related to impulsive buying behavior. The stronger the Beliefs, the greater the impulsive behavior.

H2: Impulsive buying is positively related to risky indebtedness behavior. The greater the buying impulsiveness, the greater the indebtedness behavior.

3.2.2 Anxiety toward Money as antecedent to Impulsive Buying and Risky Indebtedness Behavior

Impulsive buying is motivated by the need to reduce anxiety toward money (Edwards, 1993). Thus, to mitigate this anxiety, individuals engage in impulsive buying behavior. Therefore, individuals with high anxiety levels are subject to higher impulsivity, acting on the promise of immediate gratification. Anxiety has been positively associated with financial stressors, such as having difficulty in paying bills on time, financial strain and debt (Andrews & Wilding, 2004; Roberts, Golding, Towell, & Weinreb, 1999). Research has also suggested a relationship between general anxiety and debt (Drentea, 2000; Jenkins, Bhugra, Bebbington, Brugha, Farrell, Coid, Fryers, Weich, Singleton, & Meltzer, 2008; Roberts et al., 1999). Anxiety to is also related to an increase in spending levels (Veludo-de-Oliveira et. al., 2014) and to indebtedness (Norvilitis et al., 2003). Livingstone and Lunt (1992) suggest that the deeper individuals get into debt, the higher their willingness to

spend more, which in turn gets them into even greater debt. Indebtedness leads to higher anxiety levels which then encourage individuals to continue spending to avoid that anxiety (Wang, Liv, & Jiang, 2011). This is a ‘snowball effect’, resulting in negative outcomes undermining individuals’ and society’s well-being (Bearden & Haws, 2012). Thus, I propose the following hypotheses:

H3a: Anxiety is positively related to impulsive buying. The higher the anxiety level an individual shows, the greater his/her impulsiveness.

H3b: Anxiety is positively related to risky indebtedness behavior. The higher the anxiety level an individual demonstrates, the greater their indebtedness behavior.

3.2.3 Risky Indebtedness Behavior as antecedents of Financial Preparedness (FPE).

Anderloni et al. (2012) find that indebtedness influences individuals’ degree of financial vulnerability and thus their financial well-being. Poor financial well-being is related to levels of debt, that can be higher than individuals’ current and future earnings. Studies also associate problems with debt repayment with overall financial distress (e.g., financial strain, financial vulnerability, lack of financial well-being) (Del Rio & Young, 2008; Jappelli et al., 2008; Norvilitis & Mendes-Da-Silva, 2013). Duygan and Grant (2006) further relate debt problems to an inability to cope with unexpected changes in income. Debt has also been associated with a decreased sense of financial well-being (Norvilitis et al., 2006). Furthermore, negative beliefs about consumer credit (e.g., the belief that a credit limit serves as income) are related to poorer financial well-being (Norvilitis & Mendes-Da-Silva, 2013). This line of reasoning implies that since debt stems mainly from consumer credit, debt might also be related to poor financial well-being. Since financial preparedness is one of the critical elements in the achievement of financial well-being, I propose the following hypothesis:

H4: Risky indebtedness behavior is negatively related to financial preparedness for emergency.

3.2.4 The role of Revolving Credit Use and Number of Credit Cards

Revolving credit usage and number of credit cards have been investigated as determinants of debt. Credit usage has been related to a higher propensity to spend (Soman, 2001), to elevated levels of debt (Andelman, 1998; Lu et al., 2014; Soman & Cheema, 2002), to impulsive buying (Wang et al., 2011; Rook and Fisher, 1995), and compulsive buying (Veludo-de-Oliveira et al., 2014) behavior. The number of credit cards has been positively related to the likelihood of risky debt behavior (Norvilitis, Merwin, Osberg, Roehling, Young & Kamas, 2006; Norvilitis & Mendes-Da-Silva, 2013), and to debt (Norvilitis et al., 2006). In this study, both revolving credit and the number of credit cards were examined as moderating variables in our model. I thus propose:

H5a: Revolving credit usage moderates the relationship between credit limit beliefs and impulsive buying. For revolving credit users, this relationship is stronger.

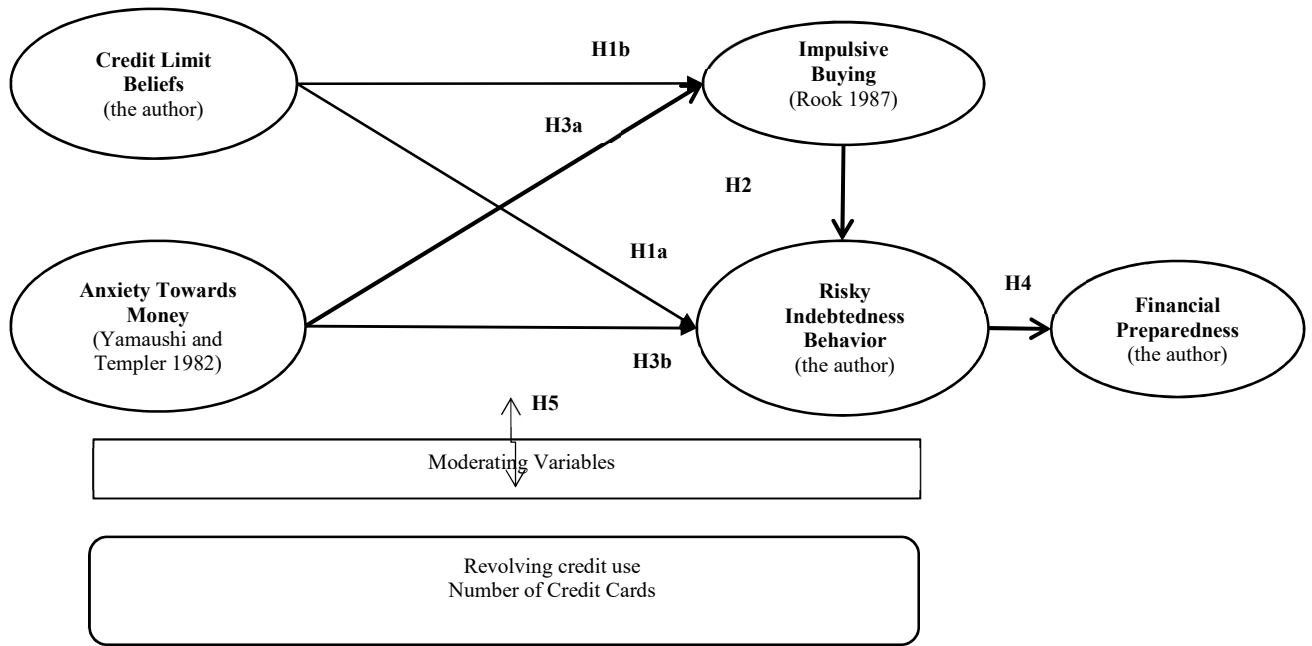
H5b: Revolving credit usage moderates the relationship between credit limit beliefs and risky indebtedness behavior. For revolving credit users, this relationship is stronger.

H5c: The number of credit cards moderates the relationship between credit limit beliefs and risky indebtedness behavior. The more credit cards an individual owns, the stronger the relationship between credit limit beliefs and risky indebtedness behavior.

3.3 The Proposed Conceptual Framework

This section presents the proposed conceptual framework (Figure 1) grounded on these hypotheses.

Figure 1: Financial Preparedness for Emergency Antecedents' Framework.



Source: the author.

4. Methods

This section describes the research design and methodology employed to select the samples and to collect and analyze the data used to test the conceptual framework proposed in this study (section 3.10). This section links the proposed theoretical model with the empirical results.

4.1 Research Design

This study employs a quantitative approach constructed on the basis of a qualitative exploratory phase. Strauss and Corbin (1998) assert that questionnaires can only reflect “reality” if the qualitative material is employed, before developing statistical procedures. This research used a survey to collect data; thus, a qualitative phase was previously established. During the qualitative phase, two different data collection methods were employed, i.e., interviews and a focus group. This combination provides the interviews with greater depth and the focus group with greater breadth (Morgan, 2004). The assessment of this phase was conducted using content analyses (Bardin, 2003). The goal of this approach was to interpret the information gathered to produce insights that would provide support for the quantitative phase of this research, most notably, to support the development of the scales and the design of the questionnaire (Strauss & Corbin, 1998). A covariance-based structural equation modeling (CB-SEM) method was employed to analyze the survey data and test the conceptual model empirically. The following sections detail the interviews and focus group procedures, primary data analysis, the techniques employed to develop the scales, the questionnaire design, and sample characteristics. The target population of this study is the typical adult consumer aged 18 years and above, holders of at least one credit card and living in Brazil.

4.1.1 Qualitative Phase

4.1.1.1 The interviews

Thirteen in-depth interviews were conducted (Annex 1 - Table 9). Respondents were recruited among graduates and undergraduates of the Fundação Getulio Vargas (FGV - EAESP) and Cornell University. Participants were required to have experience with credit cards. Before each interview, respondents were

informed of the overall purpose of the research; they were requested to authorize the recording of the interview and assured of confidentiality (Haytko, 2004; Thompson & Haytko, 1997). The interviews were conducted in an environment familiar to the respondents, thus leaving them more at ease (i.e., their classrooms or meeting rooms at their universities) (McCracken, 1988b; Thompson, Locander, & Pollio, 1989). Interviews began with a ‘grand tour’ question (McCracken, 1988) (see Table 1), and it was the interviewee who established the larger part of the course of the interviews. The inquiries were framed along with the participant’s thoughts and focused on gaining in-depth reports of particular experiences (McCracken, 1988) relating to each of the concepts under investigation. Our goal was to gain insights into individuals’ credit card experience, what their views of credit card limits were, what a debt level that undermined their future goals might be, and also what the essential elements that constituted a situation in which individuals would be vulnerable during a financial shock might be. Each interview lasted from 40 to 50 minutes. Apart from the three interviews held by Skype, all the others were conducted face-to-face. Annex 1 - Table 9 presents details of the interviewees’ profile.

Table 1
Grand Tour Questions

Credit Card usage	Could you please describe your experience with credit cards?
Credit Limit Beliefs Scale	Please elaborate your view of credit card limits.
Risky Indebtedness Scale	Could you please elaborate on a debt situation that would put your goals in danger?
Financial Preparedness Scale	Please elaborate on the minimum conditions necessary for you to cope with a financial emergency.

Source: the author.

4.1.1.2 The focus group

The combination of focus groups with interviews enables researchers to scrutinize each other’s results further (Morgan, 2004). Following the first five interviews, a focus group (Annex 1 - Table 10) was conducted aiming to endorse the findings of the interviews. A convenient sample of eight participants was used (i.e., graduate students from the Faculdades Metropolitanas Unidas – (FMU). The researcher assured that the sample had similar characteristics to the survey’s target population (i.e., credit card users). Although the group was homogeneous regarding their all being students of the same course, it

had some diversity so that the existence of different perspectives could be guaranteed, and people's mutual experience exploited (Kitzsinger, 1995).

The focus group was conducted in a comfortable environment (i.e., the students' classroom) and refreshments were offered; it started with the explanation of its general purpose (Kitzsinger, 1995). Participants were encouraged to talk about their experience with credit cards, their overall view of consumer credit, what the sources of income they usually employed when budgeting were. Respondents were also encouraged to provide examples of situations of over-indebtedness and what the minimum conditions they believed necessary and important to be prepared for any financial shock were. An experienced researcher, whose role was to moderate the focus group, intervened to keep the discussion going and to solve any possible disagreements. The group's discussion was transcribed verbatim before analysis. Annex 1 - Table 10 provides the profile of the focus group's participants.

4.1.1.3 Preliminary qualitative data analysis

The interviews and focus group achieved the proposed goals of the exploratory phase providing insights for the development of the scales, most notably as to the debt, credit card limit beliefs and financial preparedness scales. Next, a few examples were given as to how relevant this phase was by providing in-depth insights to the quantitative phase. For instance, the participants reported preferring such a payment mode to using cash to pay for their purchases because transactions with credit cards are easier and safer and allow individuals to carry a greater amount of 'money.'

Theo: "I prefer using a credit card, it is much easier and safer than carrying money."

Juliana: "You have more money in your pocket when you have a credit card."

One of the respondents reported that when a bank determined credit card limits, they were thinking of their potential income. He states that he is a frequent credit card user (and if need be he would even use his father's).

Claudio: "I don't care, I am sure I will find the money to pay, I trust my working capability. Thus, I use all my credit limits every month. (...) I am sure that somehow my working capability will provide the income I need to cover my debt (...) even if I don't have the money and I see something that I would like

to have, like books or even a trip, I just use my credit card to buy it and if I when (...) If I do not have the money to pay, I use the revolving credit (...)

On the other hand, there were respondents who reported being debt averse and who rarely used the credit card or considered credit limits as income:

Renata: “I hate being indebted (...). I am not much of a credit card user because I feel when I have a credit card I buy more than I can afford (...) having access to credit make things easier when you are in any shopping mall. Thus, I prefer not even to carry it (...). I carry a credit card only if I have planned to do some shopping and only if I know that I will have money to pay for it (...) Every purchase needs to fit my budget (...) I plan a budget based on my income.

When requested to give an example of what risky indebtedness behavior would be like, respondents generally answered that it would involve a debt-level that hindered individuals from pursuing their goals. One of the respondents stated that a risky indebtedness behavior situation would be one in which individuals needed to sell an asset or borrow from a bank to pay for their debt.

Adriana “I think that a situation that is very bad is when you have so much debt that you will be forced to borrow from someone or from banks to pay your debt. (...) if you are always in debt, you cannot save money to buy a house (...) I had once to borrow from my aunt, so I could pay a debt I had. (...). another unpleasant situation is when you need to sell your car or something else to pay a debt.”

When it comes to financial preparedness for an emergency, all the interviewees agreed regarding the minimum conditions necessary to face a financial shock, notably, having savings that enabled one to cope with financial emergencies.

Beatriz “I believe that if you don’t have savings, you will be in trouble if you lose your job, for instance (...) you need money for your expenses until you find another job (...) so you need to have savings (...) what if you have a medical emergency and you don’t have a health plan? So, you need savings to cope with this.

In the next section, I describe the quantitative phase of this research.

4.1.2 Quantitative Methods

A survey was used to collect data. The survey questionnaire was finalized after approximately two years of pre-testing. The following section describes the techniques deployed to develop the scales, explains why each scale was either chosen or built up from scratch and describes the questionnaire's design, sample characteristics and data.

4.1.2.1 Overview of the Scale Development and Validation Procedures

This research followed primarily Churchill's (1979), DeVellis's (2012), and Zambaldi, Costa & Ponchio's (2014) scale development and validation guidelines. Hence, the first step of this study was to define each construct (see section 3; Annex 2 – Table 11 presents a summary definition of each construct) grounded on a literature review and qualitative research (see section 4.1.1.3) (Churchill, 1979; Zambaldi et al., 2014). Once the concepts of the constructs were defined and before the scale development process was determined, this study investigated the existing scales already to be found in the literature. Extant literature provides scales for measuring anxiety toward money (Yamauchi & Templer 1982) and impulsive buying (Rook & Fisher, 1995). Therefore, these scales underwent a validation process. Credit limit beliefs, risky indebtedness behavior, and financial preparedness scales were developed from scratch. The process underwent some slight changes between the validation of the existing scales and the development of the new ones. Nevertheless, all the measurement tools underwent a thorough scale building and validation process, described below in detail.

This study initially employed a two-step approach for generating items for the new instruments with the aim of ensuring content validity (i.e., face validity) (Churchill, 1979; Zambaldi et al., 2014). The first one was the generation of items based on the literature and the qualitative phase (Churchill, 1979; Zambaldi et al., 2014). The second was a deductive approach grounded in the theoretical definition of each construct which also guided the generation of items (Schwab, 1980). Furthermore, since validity, reliability and internal consistency are a function of how strong the items associated with each other are, it is necessary to establish the variability of the items (DeVellis, 2012). Hence, in the item generation phase, a large number of items were tested on each

scale. Item generation includes choosing items that replicate the scale's purpose. Thus, the following guidelines were employed to generate the items: 1) multiple item measures were applied to minimize the high-levels of measurement error related to the single items scale (Churchill & Iacobucci, 2010); 2) items were developed to address only a single issue; 3) double-barreled items were avoided to prevent misunderstandings and confusion; 4) it was decided to avoid the use of negatively worded or reverse-scored items. This kind of item can have a detrimental effect on the psychometric properties of a scale. Thus the literature recommends using them with caution (Harrison & McLaughlin, 1991; Hinkin, Tracey, & Enz, 1997); 5) further, content redundancies were employed to avoid broadly diverse answers generated by identical terms. Hence, this study employed several seemingly similar items, thus improving internal consistency reliability (Churchill, 1979; DeVellis, 2012).

Additional procedures to ensure the adequate refinement of the instruments included a simple sorting procedure to classify each scale deductively (Harrison & McLaughlin, 1991; Hinkin et al., 1997); interviews with field experts (i.e., professionals with a credit card and financial services background) (Zambaldi et al., 2014); and the translation of the existing scales into English by native Portuguese/English speakers. A reverse translation was also employed to prevent item bias (Zambaldi et al., 2014). The scales developed from scratch needed no validation of their translation, apart from translating them into English for the purpose of presenting them in this study and generalizing their use in the literature. Altogether, 20 (twenty) people collaborated in these tasks. Some were graduates; others were professors, researchers, and field experts. Annex 3 – Table 12 gives the profile of each expert and the role which was assigned to him/her.

As a result, new revised versions of the items were produced and subsequently, using Qualtrics software, the next step was to collect data on the target population to pre-test the scales. Seven pre-tests were conducted (DeVellis, 2012; Netemeyer, Bearden, & Sharma, 2003; Zambaldi et al., 2014), two of which were to test the anxiety toward money scale ($N=113$; $N=309$), two other pre-tests were conducted to examine the risky indebtedness behavior scale ($N=83$; $N=227$), and the other three tested the credit limit beliefs ($N=213$), impulsive buying ($N=205$), and financial preparedness scales ($N=220$). Based on the pre-test results, I decided which items should remain and which should be excluded or adapted. These procedures allowed for the purification of the items and

respective scales and served as the basis for the final scales. Annex 4 – Table 13 gives the items in their final form.

4.1.2.2. The scales

This section explains why each scale was either chosen or built from scratch.

Anxiety toward Money Scale (ANX): Yamauchi and Templer's (1982) "money attitude scale" (Annex 5 - Table 14) is one of the most broadly used mechanisms measuring money attitudes (Baker and Hagedorn, 2008). Furthermore, it has been widely employed cross-culturally with a history of reliability (Roberts and Jones, 2001; Li, Jiang, An, Shen, & Jin, 2009). Hence, this study employed the measurement of anxiety toward money dimension of Yamauchi and Templer's (1982) scale, measured on a seven-point Likert-type scale ranging from "totally disagree" (1) to "totally agree" (7). While conducting the literature review and analyzing the items of this scale for face validity, this research detected that the scale could be understood as relating to two different dimensions. One of the dimensions related specifically to anxiety about money and another seemed to measure anxiety as related to shopping (e.g., impulse buying). In support of this result, a study presented at a conference by Sybrowsky (2007) obtained similar findings, i.e., that the anxiety attitude scale consisted of two correlated subscales, one of them being closely associated with compulsive buying. Before making a final decision, a pre-test (i.e., pre-test 1 of the anxiety scale, see table 1) was conducted, and the EFA output confirmed what I suspected, suggesting a two-scale dimension (see Annex 5 – Table 14 for the EFA result). Thus, I conducted new interviews with consumers and experts and a final pre-test to assess this scale. As a result, the anxiety toward money scale was operationalized employing a combination of Yamauchi and Templer's (1982) scale items that most adequately reflected the concept approached in this study and items created from findings of the personal interviews with consumers and experts.

Impulsive Buying Scale (IMP): This study employs Rook and Fisher's (1995) Impulsive Buying scale since it is of common use in literature. This construct was originally measured on a five-point Likert-type scale (Annex 5 – Table 15) ranging from "strongly disagree" (1) to "strongly agree" (7).

Credit Limit Beliefs Scale (CLB): Fishbein and Ajzen (1975) define ‘beliefs’ as thoughts about the likelihood that an object (e.g., credit limits) is associated with a given attribute (e.g., income). The existing literature had investigated the effect of credit limits on spending and debt by measuring actual credit card limits (Wang et al., 2011) or manipulating the level of credit limit (High - \$5,000 vs. Low \$2,000) (Soman & Cheema, 2002). I found no behavioral scales measuring such a construct. This study therefore developed a scale from scratch (Annex 4 – Table 13).

Risky Indebtedness Behavior Scale (RIB): Reviewing the extant literature, this research identified a propensity to indebtedness scale constructed by Flores and Vieira (2014) (Annex 6 – Table 16); nevertheless, this scale had not been designed to capture the construct introduced in this study (Annex 2 – Table 11); whereas the “propensity for indebtedness” evaluates the tendency to assume debt, risky indebtedness behavior focuses on debt levels that may become unaffordable. Also, as explained in the Introduction, I intended to develop a behavioral measure that seeks to evaluate debt beyond the financial indicators that are exclusively used in the literature (DeVaney & Lytton, 1995; Norvilitis et al., 2003; Norvilitis et al., 2003; Norvilitis et al., 2006; Tokunaga, 1993). Consequently, a brand-new scale (Annex 4 – Table 13) was developed for this construct.

The Financial Preparedness for Emergency Scale (FPE): the literature (Anderloni et al., 2012; Bruggen et al., 2017; Netemeyer et al., 2017) emphasizes the use of financial information, financial ratios (e.g., debt-to-income ratio), students’ level of debt, and other quantitative indicators of the financial situation such as income level as the objective measure for financial well-being. A scale is here proposed that measures a subjective facet of a financial well-being antecedent. This scale has thus here been developed from scratch (Annex 4 – Table 13).

4.1.2.3. Assessing the Scales

All the scales were assessed using confirmatory factor analysis (CFA). Maximum Likelihood CFA was applied to evaluate the relationships among items and scales and each instrument dimensionality (Churchill, 1979; Hinkin et al., 1997; Zambaldi et al., 2014). CFA was conducted using SPSS 21. The suitability of the data for factor analysis was assessed using the Kaiser-Meyer-Olkin (ranges from 0 to

1, cutoff point ≥ 0.7) and Bartlett's test of sphericity (0.000) (Hair, Black, Babin, & Anderson, 2014; Hinkin et al., 1997). To evaluate how well the items related to the latent constructs, the psychometric properties of all the items were scrutinized. The ideal minimum value of the factor loadings is 0.7 (Hair et al., 2014). Items with cross-loadings above 0.4 or standardized factor loadings below 0.5 were discarded. The variance (AVE) based on the Kaiser (eigenvalue greater than one) (ideal ≥ 0.5) (Hair et al., 2014) was further examined. To assess reliability this study employed both Cronbach's alpha (> 0.70) (Cronbach, 1951) and Fornell and Larcker's (1981) composite reliability index (CRI) (> 0.70). This strategy was employed because Cronbach's alpha has a limit, it can inflate as the number of similar items and the number of items in a scale increase. This limitation is surpassed by the composite reliability index (CRI) which shows the proportion of variance of the true score of a construct in relation to the total variance of the calculated score (Zambaldi et al., 2014). Convergent validity was evaluated employing the Average Variance Extracted (AVE > 0.5) (Fornell & Larcker, 1981) and discriminant validity was assessed comparing the square root of each AVE with the inter-construct squared correlation (Fornell & Larcker, 1981) and by examining the correlations between the constructs (< 0.85 , Kline, 2005).

All the pre-tests were conducted with respondents registered on the panel of an online market research firm for research purposes (Annex 6 – Table 19). All the items that had commonalities above 0.5 and loadings above 0.7 were maintained. All the scales had KMOs above 0.8 (minimum 0.812 - ANX Scale; and maximum 0.935 CLB Scale) and obtained the required 50% minimum of Variance Explained (minimum 62.05% - FPS Scale; Maximum 78.05 % - CLB Scale). Except for the FPE scale (0.76), all the other Cronbach's alphas were higher than 0.8. I assessed scales' CFAs employing the same indices used to evaluate the model CFA. For the sake of conciseness, section 5.1 below describes these indices in full detail.

4.1.2.4. Questionnaire design

The final response measurement tool comprises 22 items (Annex 4 – Table 13), measured in seven-point Likert-type scales ranging from “totally disagree” (1) to “totally agree” (7). When designing a questionnaire, changing types of scales is done in an effort to reduce common method bias (CMB). However, every time the kind of scale is altered it demands more attention and additional learning from

respondents (Hair et al., 2014). Hair et al. (2014) argue that changing the scale type must be grounded on some underlying logic such as enhancing the quality of the response. Therefore, this strategy should be used with caution (Hair et al., 2014). Grounded on that recommendation, I employed one type of scale only, the seven-point Likert type. I further grounded our choice on the fact that a seven-point scale allows for better variability if compared to a five-point-one (DeVellis, 2012). Accordingly, and although controversially (DeVellis, 2012; Zambaldi et al., 2014), this study decided to maintain a midpoint on the response option scale relying on the understanding that respondents would perceive it as just a midpoint (DeVellis, 2012). While designing the questionnaire, a few techniques were applied for controlling common method biases, as recommended by Podsakoff, MacKenzie, Leem, and Podsakoff (2003). Respondents were assured of response anonymity and counterbalanced question order. Questions were kept concise and straightforward; and complicated syntax were, further, avoided.

4.1.2.5. Sample and descriptive

Three companies of different sectors offered to launch our survey on their database. Thus, respondents came from three customer databases. The first database consisted of consumers who were enrolled on the panel of an online market research firm for research purposes. The second source consisted of consumers of a low-income driven credit card business. The third was of consumers enrolled in a 'money management' fintech company; individuals enroll in this database mainly for the purpose of managing their finances (annex 6 – Tables 17, 18, and 19 describe each database profile). The purpose of having various sources was to gain access to a large sample. Additionally, online panel samples are more diverse than college student samples (Berinsky, Huber, & Lenz, 2012; Kraut, Olson, Banaji, Bruckman, Cohen & Couper, 2004) and the time costs of data collection are lower than those of collecting over the telephone or personally, for instance (Kraut et al., 2004).

An online questionnaire was used to collect information and to test the research model. Qualtrics software was used to design and distribute the survey. The field study took place between August and November 2017. Respondents received an e-mail inviting them to participate in the survey. Since a primary requirement was that the population should have a credit card or that they had had one previously, respondents were requested to indicate if they had a credit card and, if so, how many. Data preparation procedures and safeguards were conducted to ensure the integrity of the sample. I checked

on whether the time employed to complete the questionnaire was insufficient and Qualtrics was set to avoid people's participation in this survey more than once. Two thousand four hundred and sixty-seven respondents accessed the questionnaire, 1654 of whom started the survey. A complete case approach to the data was employed. Thus, incomplete questionnaires were excluded, providing a total of 1441 answers. Of those, 153 were excluded from the analyses for either not having had credit cards (whether now or in the past) or not answering this question, and for their erratic response pattern ($SD = 0$ and < 0.5), resulting in a usable sample of 1288 respondents (51.9% of them women). The average age of participants was 37; 43.42% belonging to the low-income bracket (categories D and E), and 62.5% having had higher education. Table 2 shows the socio-demographic characteristics of the overall sample. In comparison to the Brazilian population (i.e., 51.5% female; IBGE, 2018) the profile of the sample reflects the gender distribution. The average age of participants reflects the major age range group (e.g., adults) in the population (IBGE, 2016). However, the sample is biased towards low-income (IBGE, 2016), and higher education level than in the population (OCDE, 2016).

Table 2 Socio-Demographic characteristics of the overall sample					
Gender		Age		Education	
Male	47.8%	Mean	36	Primary	1.8%
Female	52.0%	Minimum	18	High School	16.8%
NA	0.2%	Maximum	71	Technician/Tech	11.6%
				Higher Education	62.5%
				Postgraduate	6.7%
Annual Income					
Classification	Category		Range		%
High Income	A		\$51,112.36	And above	2.0%
	B1		\$34,076.00	\$51,112.36	5.6%
Middle Income	B2		\$17,039.63	\$34,076.00	22.36%
	C1-C2		\$10,225.09	\$17,036.36	25.02%
Low Income	D		\$3,410.54	\$10,225.09	37.4%
	E		Up to	\$3,410.54	6.02%

Note: US\$/R\$ 3.40

Source: the author.

5. Results

a. Structural equation modeling procedures (SEM)

Covariance-based SEM (CB-SEM) is mainly used to confirm (or reject) theories by assessing how well a proposed theoretical model can estimate the covariance matrix for a sample data set. Our choice was, therefore, to employ CB-SEM instead of PLS-SEM, since the latter is mainly used to develop theories in exploratory research (Hair, Hult, Ringle, & Sarstedt, 2014). This study employs SPSS AMOS Graph version 22 to analyze the data through: (1) measurement model testing, and (2) structural model testing.

Before analyzing the measurement model, it was necessary to make a test to verify item reliability. Not all the items attained the cut-off load point desired (>0.7 , Hair et al., 2014). However, since the literature (Esposito, Chin, Henseler, & Wang, 2010) affirms that loadings ranging from 0.5–0.6 may be acceptable, we kept the one item whose load was 0.562 (Anxiety Scale) and four other items whose load exceeded 0.6 but came below the cut-off value of 0.7 (i.e., one impulsive buying item, 0.606; two risky indebtedness items, 0.633 and 0.648; and one financial preparedness item, 0.663). Apart from these, all the other factor loadings exceeded 0.70 (see Annex 4 – Table 13). On the basis of these results, we considered these indicators valid at this stage. The next step was to assess the convergent and discriminant validity and internal consistency.

Convergent validity was evaluated employing Fornell and Larcker's (1981) calculation of the Average Variance Extracted ($AVE >0.5$) and by assessing the composite reliability of each construct (>0.7 ; Fornell & Larcker, 1981). Discriminant validity was assessed comparing the square roots of each AVE to the inter-construct squared correlation (Fornell & Larcker, 1981) and by examining correlations between the constructs (<0.85 , Kline, 2005). Internal consistency was assessed by Cronbach's Alpha test (> 0.7 , Hair et al., 2014; >0.8 , Nunnally, 1978). All Cronbach's Alpha, Composite Reliability, and AVE were higher than their threshold. Correlations between the constructs are all below the cut-off point (<0.85). All the scales achieved discriminant validity; nonetheless, when it came to Risky Indebtedness and Impulsive Buying the inter-construct squared correlation (0.73) was slightly higher than the square root of the indebtedness behavior scale's AVE (0.72). I believe this irrelevant difference (0.01) should not be allowed to undermine the discriminant validity between these two scales. Nevertheless, to

guarantee discriminant validity this study employed Bagozzi, Yi, and Phillips's (1991) test; as predicted, the output suggests that there is discriminant validity between these two scales (Unconstrained Model CMIN = 136.75; DF:26. Constrained Model CMIN = 154.98; DF:27; Delta Chi-square = 18.42 >4; the threshold is 4). Table 3 presents the descriptive statistics and the correlation matrix.

Table 3
Descriptive statistics and correlation matrix.

Scale	Composite Reliability	Cronbach's Alpha	AVE	(1)	(2)	(3)	(4)	(5)
Anxiety Toward Money (1)	0.87	0.859	0.63	0.79				
Credit Limit Beliefs (2)	0.91	0.906	0.72	0.20	0.85			
Impulsive Buying (3)	0.86	0.855	0.61	0.43	0.47	0.78		
Risky Indebtedness Behavior (4)	0.91	0.835	0.52	0.42	0.44	0.73	0.72	
Financial Preparedness Emergency (5)	0.76	0.747	0.50	-0.29	-0.17	-0.34	-0.65	0.71

Note: Diagonal elements (bold) are the square root of the variance shared between the constructs and their measures (AVE). Off-diagonal elements are the correlations among constructs.

Source: the author.

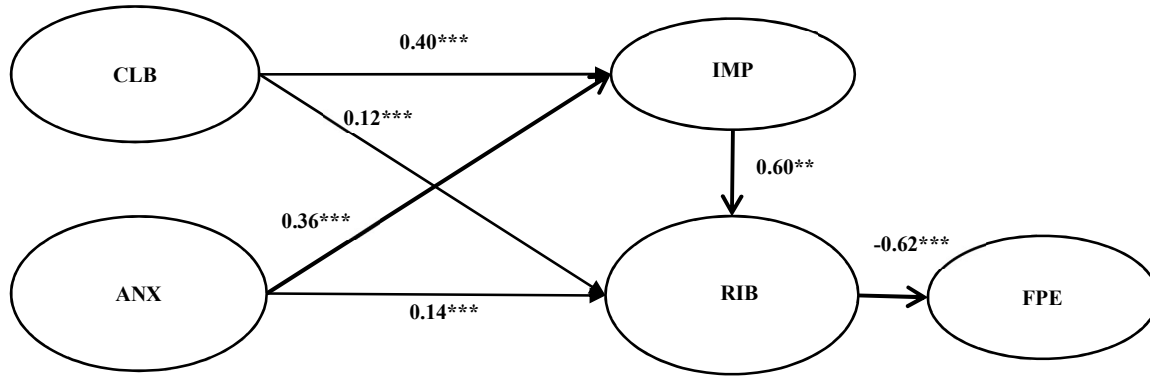
The next step was to evaluate model fit. The overall model fit was assessed employing the normed chi-square (CMIN/DF <5, Hair et al., 2014; Marôco, 2010; Kline, 2005), the Goodness-of-Fit Index (GFI >0,9, Kline, 2005), the Comparative Fit Index (CFI> 0.95, Bentler, 1990; Brown, 2006), and the Root Mean Square Error of Approximation (RMSEA<0,08 Steiger, 1990; Browne & Cudeck, 1993). The initial fit was good: CMIN/DF 4.071; $p<0.000$; GFI 0.946; TLI 0.954; CFI 0.960; RMSEA 0.049. However, I found a few high Modification Indexes (MI) and decided to investigate them for further model improvement. There were three MIs above 35, and we started with those. The greatest MI (MI=69) was that related to the items IMP5 ("I find myself sometimes buying things in an irrational manner") and IND5 ("I am frequently in debt"). I decided to exclude IND5 since it was an item that could be easily confused with an impulsive trait or behavior. I then conducted another CFA and obtained a slightly better fit: CMIN/DF: 3.865; $P<0.001$; GFI: 0.950; TLI: 0.958; CFI: 0.964; RMSEA: 0.045. I also assessed residuals. However, I found less than 5% of residuals above the cut-off point (2.58; Brown, 2006). Brown (2006) argues that indices such as MIs and standardized residuals should not be the sole parameters used to improve model fit. Instead, all model re-specifications must be grounded on previous theory (Brown, 2006). Therefore, since the model had achieved a good fit, I decided not to investigate further for high MIs.

Before testing the hypothesis, I conducted a check for common method bias (CMB) to determine to what degree any such biases existed. There are several analytical procedures employed to estimate the degree to which the data may be influenced by biases introduced by the survey method. I applied the Common Latent Factor (CLF) as recommended by Podsakoff, MacKenzie, Leem, and Podsakoff (2003), which allows for measurement error. The rule of thumb is used to set the threshold to 50%. Thus, if the factor explains less than 50% of the variance, it may be an indication that there is no significant common method bias in this datum. To operationalize the common latent factor (Podsakoff et al., 2003), all manifested variables are related to a single factor, and estimated the common variance as the square of the common factor of each path before standardization. Our model's result shows a 20.05% variance. This result suggests that our survey was not affected by CMB. In section 4.3.2.4 I described a series of techniques that were employed to reduce or control for CMB. However, every method has its limitations (Spector, 2006). Thus, I posit that although there is evidence which shows the contrary, it may be that this study is not free from common method bias. It is to be expected that social desirability should affect some of our items. For instance, individuals may not be willing to report their indebtedness behavior or their real attitudes toward money. Nonetheless, some relevant implications can be drawn from the current study.

b. Structural Model Results

All the paths were significant, thus supporting H1a; b, H2, H3a; b, c and H4 (Figure 2). Large and significant direct effects were identified between: credit limit beliefs and impulsive buying ($B=0.39$, $p<0.000$); anxiety and impulsive buying ($B=0.36$, $p<0.000$); impulsive buying and risky indebtedness behavior ($B=0.61$, $p<0.000$); and risky indebtedness behavior and financial preparedness ($B=-.87$, $p<0.000$). Smaller but significant direct effects were identified between credit limit beliefs and risky indebtedness behavior ($B=0.13$, $p<0.000$) and anxiety and risky indebtedness behavior ($B=0.13$, $p<0.000$).

Figure 2. Results of the conceptual framework model using SEM.



Source: the author

To cross-validate the outputs of the structural model used, the overall sample was split randomly into two groups and the measurement and SEM models were tested. Both samples achieved a good measurement model fit: Sample 1 CFA model fit: CMIN/DF: 2.842, $p < 0.000$; GFI: 0.934; CFI: 0.959; RMSEA: 0.054. Sample 2 CFA model fit: CMIN/DF: 2.677, $p < 0.000$; GFI: 0.935; CFI: 0.962, RMSEA: 0.051. The structural models of both samples obtained equivalent results (Table 4), with slightly distinct sizes in some relationships, but all in the same direction, indicating the reliability and boldness of the model used.

Table 4
Cross-Validation Structural Model Outputs

Model	Overall Sample		Sample 1		Sample 2	
	B	p	B	p	B	p
CLB-> IMP	0.40	***	0.39	***	0.39	***
ANX->IMP	0.36	***	0.36	***	0.36	***
IMP->RIB	0.60	***	0.59	***	0.61	***
RIB->FPE	-0.62	***	-0.63	***	-0.62	***
CLB->RIB	0.12	***	0.08	0.044	0.17	***
ANX->RIB	0.14	***	0.17	***	0.11	0.003

Sample 1			Sample 2		
Scale	CR	AVE	Scale	CR	AVE
ANX	0.88	0.63	ANX	0.87	0.63
CLB	0.91	0.72	CLB	0.91	0.72
IMP	0.88	0.65	IMP	0.85	0.58
RIB	0.84	0.51	RIB	0.85	0.53
FPE	0.75	0.50	FPS	0.75	0.50

Note: *** for $p < 0.000$; Note: Fornell and Larcker's (1981) CR (Composite Reliability; > 0.70) and AVE (Average Variance Extracted; > 0.50); Source: the author

Overall, in structural models there is an exogenous variable explaining an endogenous variable, any other variable between these two variables (i.e., between the exogenous and endogenous) corresponds to some mediation; therefore, mediation is a common concept in structural models (Hair et al., 2014). Hence, to further validate the model, mediation effects were tested. This study takes Zhao, Lynch and Chen's (2010) approach to mediation; a mediation effect was, therefore, recognized even if there is no 'effect to be mediated' (i.e., a relationship between X and Y). In this present study, I examined five models each encompassing a variable in between each relationship between an exogenous and an endogenous construct in the model (Table 6). SEM was used to estimate all the parameters simultaneously and test five models by conducting a bootstrapping procedure ($B=500$) using a Maximum Likelihood method and a 95% confidence interval bias corrected as recommended by Zhao et al. (2010).

A large indirect negative effect was found between impulsive buying and financial preparedness, mediated by risky indebtedness behavior ($B=-0.533$; $p<0.000$). Two large indirect and positive effects, both mediated by impulsive buying, were also identified. The first between credit limit beliefs and risky indebtedness behavior ($B=0.218$; $p<0.000$); the second, between anxiety and risky indebtedness behavior ($B=0.241$; $p<0.000$). A smaller but significant, indirect and negative effect was also found between credit limit beliefs and financial preparedness, mediated by risky indebtedness behavior ($B=-0.115$; $p=0.003$). No significant mediation of risky indebtedness behavior was found in the relationship between anxiety and financial preparedness, ($p<0.066$) (see Table 5 for details).

Table 5
Indirect Effects.

Model	Direct Effect (c)	a	b	Mean indirect effect of the bootstrap	Lower Bounds	Upper Bounds	Signal of the multiplication of the three coefficients	Type of Mediation
ANX->RIB->FPS	$p=0.066$	0.129	-0.874	-0.112	-0.260	-0.174		Indirect only mediation
ANX->IMP->RIB	***	0.355	0.613	0.218	0.171	0.259	Positive	Complementary Mediation
CLB->IMP->RIB	***	0.395	0.610	0.241	0.197	0.284	Positive	Complementary Mediation
CLB->RIB->FPS	$p=0.003$	0.132	-0.874	-0.115	-0.265	-0.189	Negative	Competitive Mediation
IMP->RIB->FPS	***	0.613	-0.874	-0.533	-0.423	-0.323	Negative	Competitive Mediation

Note: *mean indirect effect of the bootstrap with a 95% confidence interval. 1. *Complementary mediation*: Mediated effect ($a \times b$) and direct effect (c) both exist and point in the same direction. 2. *Competitive mediation*: Mediated effect ($a \times b$) and direct effect (c) both exist and point in opposite directions. 3. *Indirect-only mediation*: Mediated effect ($a \times b$) exists, but no direct effect.

Source: the author.

Two unexpected and unexplained significant direct effects were identified between credit limit beliefs and financial preparedness ($B=0.1, p=0.003$); and impulsive buying and financial preparedness ($B=0.28, p<0.000$). Zhao et al., (2010) notes that unexpected and unexplained “direct” effects suggest the existence of omitted mediators. Thus, further potential mediators were sought, the result indicating that risky indebtedness behavior mediates both relationships, providing a possible meaning for the unexplained direct paths, reflected in the result of the two competitive-mediation presented in Table 6.

c. Multi-group analysis

Multiple-group SEM calls for examination if the values of the model’s parameters vary across groups (Kline, 2005). The process consists of dividing the sample into two (or more) groups for each moderating variable. In this study, I investigated whether revolving credit usage and the number of credit cards moderate the relations specified in hypotheses H5 a-c. The first step to perform multi-group analysis was to assess measurement invariance. Following Byrne’s (2010) recommended steps, whether the model achieved (1) configural and (2) metric invariance was investigated. A three-step approach to testing for metric invariance was employed. Configural invariance was first examined and was assessed by evaluating the model fit of the unconstrained model. Secondly, the χ^2 difference (constrained and unconstrained model fit) was investigated to assess metric invariance. Non-significant results suggest that the groups are noninvariant. The literature (Byrne, 2010) argues that a sizeable sample, which is the case of this study, has substantial power to detect minor differences as statistically significant because the invariance test relies heavily on χ^2 , therefore, any significant output may be a result of the sample size and not because of noninvariance. Thus, despite there being a more recent and practical approach (Byrne, 2010), it was decided also to use the CFA difference test for metric invariance. Cheung and Rensvold (2002) state that evidence of noninvariance is found if the ΔCFI value is less than the 0.01 cutoff point. If the findings had been different, or a significant output in the χ^2 difference or even if the ΔCFI were higher than the cut-off point, I then conducted a procedure test for equivalencies across groups, examining sets of parameters in a gradually restrictive mode (Byrne, 2010). It is worth noting that it was decided not to conduct an excessively restrictive test. Thus, I examined only the patterns of factor loadings for each observed measure (Byrne, 2010). The literature (Byrne et al., 1989; Byrne, 2010) argues that we can proceed to test for multigroup analysis so long as there is at least one

noninvariant parameter other than the marker indicator. This approach is named the partial invariance strategy. I find that all variables achieved configural invariance, and except for schooling that achieved full metric invariance, all other variables achieved partial metric invariance (Table 6); thus, making multi-group analysis possible. As to whether income, age, gender, and schooling moderated the model or any of its relationships was also investigated.

Table 6
Measurement Invariance Analysis

Variables	Revolving Credit		Number of Credit Cards		Income		Gender		Schooling		Age (Young and Senior)		Age (Young and Older Adult)	
Models	P	Metric Invariance	P	Invariance	P	Invariance	P	Invariance	P	Invariance	P	Invariance	P	Invariance
Anxiety	0.893	Full metric Invariance	0.489	Full	0.881	Full	0.340	Full	0.438	Full	0.769	Full	0.148	Full
Credit Limit Beliefs	0.514	Full metric Invariance	0.091	Full	0.001	Partial	0.025	Partial	0.149	Full	0.113	Full	0.643	Full
Impulsive Buying	0.000	Partial metric Invariance	0.305	Full	0.430	Partial	0.143	Full	0.056	Full	0.000	Partial	0.000	Partial
Risky Indeb. Behavior	0.000	Partial metric Invariance	0.041	Partial	0.000	Partial	0.206	Full	0.319	Full	0.000	Partial	0.093	Full
Financial Preparedness	0.037	Partial metric Invariance	0.049	Partial	0.087	Full	0.395	Full	0.935	Full	0.095	Full	0.491	Full

Source: the author.

The income criteria from ABEP (2016) were used to categorize income - which covers seven different income groups, from high to low: A, B1, B2, C1, C2, D-E (Table 2, above). The sample was divided into high and low-income groups. High-income group respondents were taken to include those belonging to the A and B1 income categories, while the low-income group consisted of the D and E income classes. Income class B2, C1 e C2 (considered as middle-income bracket) were not included to allow for variability. The educational classification was based on the Brazilian National Institute of Research into Education (Instituto Nacional de Estudos e Pesquisas Educacionais, 2012) classification. The group was then divided into the more-educated, which consisted of participants with higher education and post-graduation, and the less-educated, which included respondents with technical, high school and primary education. Regarding age, the Organization for Economic Co-operation and Development's (2017) age group classification consisting of three groups: 15-24 (Young), 25- 54 (Adult), and 55 - 64 (Senior) was employed. Beyond the comparison between the Young and Senior groups, the adult group was split into two, called respectively 'young-adult' and 'older-adult,' which were also compared. Table 7 gives group descriptions and sample sizes.

Table 7
Moderators' Groups/Variable Descriptions

Moderating Variables	Group 1	<i>n</i>	Group 2	<i>n</i>
Revolving Credit Use	Yes, I use Revolving Credit	315	No, I do not use it	955
Number of Credit Cards	Low - 1 credit card	551	High - 2+ credit cards	673
	Group 1	<i>n</i>	Group 2	<i>n</i>
Income Classification 1	Low - up to \$10,221.82 annually	556	High, above \$34,076.00 annually	403
Age Classification 1	Young	122	Senior	127
Age Classification 2	Young Adult (25 to 39)	704	Older Adult (40 to 54)	331
Gender	Male	614	Female	666
Schooling	Less Educated - Technitian/Technical, High School	350	More Educated - Higher and PostGrad	891

Source: the author.

It was found that revolving credit use moderates the relationship between credit limit beliefs and risky indebtedness behavior for non-revolving credit users only (YESRev: $p<0.491$; NORev: $p<0.000$). No moderating effect is found when it comes to the number of credit cards ($p<0.155$). It is found that income moderates the relationship between credit limit beliefs and risky indebtedness behavior for the high-income group (HI: $p<0.000$; LI: $p=0.221$). No moderating effects of age, gender, or schooling were found. Annex 9 – Table 24 presents the details of the results of these variables. Table 8 presents the summary of the outcome of this study.

Table 8
Summary of the Hypotheses

	Hypotheses	Results
H1a	Credit limit beliefs are positively related to risky indebtedness behavior. The stronger the belief, the higher the indebtedness behavior.	Accepted
H1b	Credit limit beliefs are positively related to impulsive buying behavior. The stronger the belief, the higher impulsive behavior.	Accepted
H2	Impulsive buying is positively related to risky indebtedness behavior. The higher the buying impulsiveness, the higher the indebtedness behavior.	Accepted
H3a	Anxiety is positively related to impulsive buying. The higher the anxiety level an individual show, the higher his/her impulsiveness.	Accepted
H3b	Anxiety is positively related to risky indebtedness behavior. The higher the anxiety level an individual show, the higher the indebtedness behavior.	Accepted
H4	Risky indebtedness behavior is negatively related to financial preparedness.	Accepted
H5a	Revolving credit usage moderates the relationship between credit limit beliefs and impulsive buying. For revolving credit users, this relationship is stronger.	Rejected
H5b	Revolving credit usage moderates the relationship between credit limit beliefs and risky indebtedness behavior. For revolving credit users, this relationship is stronger.	Partially accepted
H5c	The number of credit cards moderates the relationship between credit limit beliefs and risky indebtedness behavior. The more credit cards an individual owns, the stronger the relationship between credit limit beliefs and risky indebtedness behavior.	Rejected

Source: the author.

5. Discussion of Findings and Implications

In addressing the research question as to why some people get further into risky indebtedness behavior than others, it is found that personal factors play an important role as predictors. Individuals have different traits: how these differences might impact consumers' spending, indebtedness, and financial preparedness, was one of the researcher's primary concerns. This study shows that consumers who believe that credit limits serve as income are more prone to get into risky indebtedness and engage in impulsive buying. That is, credit limit beliefs have a direct positive association with risky indebtedness behavior and impulsive buying. The stronger the belief that credit limits serve as income, the higher the degree of consumers' risky indebtedness behavior and impulsive buying. Further, an indirect relationship was found between credit limit beliefs and risky indebtedness behavior mediated by impulsive buying. That is, impulsive buying is one of the mechanisms explaining the relationship between credit limit beliefs and risky indebtedness. This result suggests that the more an individual believes that credit limits serve as income, the more he/she buys impulsively and consequently, the further he/she gets into highly risky indebtedness behavior. Besides the fact that impulsive buying might explain this relationship, another possible explanation is that consumers who see credit limits as additional income, might plan their budget and purchasing decisions considering their income to be much higher than, in fact, it is (Wang et al., 2011; Lu et al., 2014), thus getting into risky indebtedness.

The outcome of this research further suggests that individuals for whom money is a source of problems or a solution (i.e., high-level of anxiety toward money) are more prone to impulsive buying and risky indebtedness. This study asserts that such anxiety might make individuals face a ambiguous decision-making process (e.g., shall I save or spend money?), leading them to even higher levels of anxiety. As a means of finding relief, these anxious consumers fall into a compensatory and suboptimal form of behavior, thus buying impulsively (Wang et al., 2011) and therefore acquiring debt. This study further finds an indirect effect of impulsive buying on the relationship between anxiety and risky indebtedness, that is, impulsive buying is also a mechanism explaining the relationship between anxiety and risky indebtedness. This result suggests that the more anxious an individual is, the more he/she manifests impulsive buying, and consequently, the more deeply he falls into highly risky indebtedness behavior.

On answering how risky indebtedness behavior affects consumers' financial preparedness, and how that might impact their financial well-being, the findings of this research are consistent with those presented in the literature. Past research (Gatherhood, 20012) claims that consumers with a tendency to indebtedness tend to be more exposed to financial shocks. This present author finds a direct and negative association between risky indebtedness and financial preparedness, consumers with highly risky indebtedness behavior manifest less financial preparedness; they are, therefore, more likely to be unable to handle financial shocks. Further indirect effects were identified. These findings suggest that highly risky indebtedness may also be the mechanism explaining the two negative relationships between: 1) impulsive buying and financial preparedness; that is, the more an individual manifests impulsive buying behavior, the more he/she gets into debt, consequently, reducing his/her financial preparedness; and 2) the relationship between credit limit beliefs and financial preparedness; this suggests that the more an individual believes that credit limits serve as income, the further he/she gets into debt, consequently weakening his/her financial preparedness.

This study also shows some interesting and expected, however, counter-intuitive results. The first one is that revolving credit use moderates the relationship between credit limit beliefs and risky indebtedness behavior; however, only for revolving credit non-users. One explanation for such a finding is that revolving credit non-users are less experienced when it comes to the use of credit card features (i.e., credit limits and revolving credit). They therefore tend to be naïve and prone to believe that credit limits act as income, thus affecting their risky indebtedness behavior (i.e., I have less experience with credit cards and I do not understand the rules very well. Thus my belief that credit limits serve as income is stronger, and therefore, I get further into debt). This explanation is consistent with the literature (Soman & Cheema, 2002) that finds that credit limits have a greater influence on spending for individuals who are less experienced with credit cards.

The second and thought-provoking counter-intuitive finding is that income moderates the relationship between credit limit beliefs and risky indebtedness behavior, but only for high-income consumers. However, it was expected to have a greater effect on moderate low-income consumers. I believe that there might be two explanations for such a result. The first of them is the credibility of the credit. Past literature (Soman & Cheema, 2002) finds that the effect of credit limits exercises

greater influence on spending if the limit has credibility, that is to say, if consumers believe the banks apply a rigorous process in determining their credit limits, then consumers are more certain that these limits may be regarded as ‘income’. In general, the process of determining the credit limit is rigorous. Several variables and indicators such as income, arrears, and employability are analyzed. Overall, high-income individuals are more likely to be acquainted with this process because they have more experience of banking institutions (e.g., they have a bank account, credit cards, investments, savings). In this sense, it is more likely that this rigor will lead to the higher credibility of the given credit limit for high-income individuals (when compared to low-income ones); thus, explaining this result. The second explanation is the fact that credit limits are a function of income, i.e., the lower the income, the lower the credit limit. Hence, low-income consumers might not have a sufficient credit limit to serve as an extra source of ‘income’. In search of the explanation for such a result, the credit card company team was contacted, and they informed us that before the new credit limits policy (which grants credit limits up to the individuals’ income level; whereas, past policy, back in 2014, granted limits way over individuals’ income) was in force they used to have high levels of delinquency for low-income consumers. This information supports the explanation for this result, suggesting that, when having high credit limits, even the low-income group get more deeply into risky indebtedness behavior because they believe that credit limits serve as income. When the credit limits were reduced, this belief faded, thus the effect on risky indebtedness behavior was also weakened.

Some of the findings of this study contradict previous results given in the literature; some being even totally unexpected. For instance, the moderating role of the number of credit cards was tested. Whereas the literature suggests that consumers with more credit cards have increased likelihood of getting into risky indebtedness behavior (Norvilitis et al., 2006; Norvilitis & Mendes-Da-Silva, 2013) and that the number of credit cards predicts debt (Norvilitis et al., 2006), no such result is found here. On the contrary, the number of credit cards did not affect any of the model’s relationships. An explanation could be that the economic crises which have been affecting Brazil for the past two years, might either have contributed to the development of a greater awareness of the credit card effect or might have reduced consumers’ resources, leading people to being more cautious and for instance, engaging in more careful pre-shopping preparation (Bellini, Cardinali, & Grandi, 2017), thus attenuating the effect of the ‘number’ of credit cards.

Another finding contrary to that of existing literature is that gender does not moderate the model, or any of its relationships. Previous research on the gender role in spending and debt is inconclusive. Davis and Lea (1995) found that women were more likely than men to carry debt (i.e., credit card debt). More recently, Wang et al. (2011) and Lu et al. (2014) found that men had a higher likelihood than women of having debt (i.e., credit card revolving debt). Gangai and Agrawal (2016) find that men buy more impulsively than women. Contrasting with such results, the results of this present study suggest that men and women behave similarly when it comes to the relationships between credit limit beliefs, anxiety, impulsive buying, indebtedness and its consequences in financial preparedness. There might be several explanations for this outcome. First, it is argued here that this may be a result of the higher financial independence that women have conquered in recent decades. It may also be due to an increase in their interest in financial knowledge, which in its turn may have fostered safer financial decision-making on women's part. Extant literature (Farrell, Fry, & Risse 2015) finds that women with greater certainty of their financial management ability are less likely to get into debt. Greater certainty comes with knowledge of a specific topic of interest. When individuals apply their effort to earning their own money, it is natural that they should be more interested in acquiring more knowledge about it, and thus become more confident of themselves. A study conducted by the Brazilian Central Bank (2017) supports this explanation, it finds for instance that both men and women have the same credit card usage level, i.e., 45.4% of men use credit cards as the leading consumer credit provider, as compared to 44.6% of women. Implying that there is no gender difference when it comes to credit usage. A second explanation might be the fact that access to consumer credit, in Brazil, is a recent phenomenon in the general population. Therefore, a constrained demand for consumption from a previous lack of consumer credit might have made consumers, regardless of gender, act similarly. This constrained demand might also be the explanation for two other findings of this present research. Those in which I find no moderating effect of either age or schooling. That is, the previous lack of consumer credit made consumers of both genders and of all stages of life and levels of schooling eager to consume, thus producing this result.

Research Implications

Financial well-being is a topic of increasing relevance for academia, policymakers, and society in general. A recent report on financial education conducted by the Brazilian Central Bank (2017) shows that 56% of the respondents do not exercise any money management control (i.e., by budgeting). The report further demonstrates that in the case of losing their primary source of income (e.g., losing their jobs) only 14.3% of the respondents would be able to cover their living expenses for over six months, whereas 39% would be able to cover them for from one week to one month only; that 70% of respondents would be unable to cope with unexpected spending without having to borrow money from others; and that over half (51.2%) of respondents had not saved any money in the past twelve months. These findings suggest that Brazilians are low in financial preparedness and show how important it is to investigate this phenomenon in this context.

The proposal and definition of a critical element in financial well-being and the investigation of its antecedents thus adds to the literature and sheds light on their causes. The current research offers a comprehensive approach to demonstrating how personal factors and financial behaviors together affect consumers' financial preparedness. Employing the financial well-being frame of reference given by Bruggen et al. (2017), this study finds that personal factors such as attitudes toward money and credit limit beliefs lead to destructive financial and suboptimal buying behavior, most specifically, to risky indebtedness and impulsive buying behaviors, which in their turn affect individuals' financial preparedness. This study therefore adds to the existing literature on consumer behavior and financial well-being in three ways. First, as far as our knowledge goes, it proposes and examines a comprehensive frame, not previously explored, that investigates traits, beliefs, and behavior jointly as antecedents of financial preparedness, in the context of financial services and financial well-being. Furthermore, in a context of extremely high interest rates. Secondly, it proposes the concept of financial preparedness. Thirdly, it makes methodological contributions by developing behavioral scales for concepts that were usually previously measured by employing financial indicators.

Addressing the question as to how consumers can avoid getting into suboptimal spending and debt behavior, and be prepared for any financial eventuality, several implications may apply. To avoid

elevated levels of impulsive behavior and debt, and thus avoid lower levels of financial preparedness, consumers may, for instance, adopt pre-shopping planning habits. Consumers may also adopt good financial habits, such as managing their money and spending, by drawing up a budget. Today, some fintechs (i.e., finance and technology companies) play a key role in consumers' budgeting management. Some of them automates the importing and categorizing of transactions from users' bank account and credit cards and provides their clients with a money management tool. The literature (Robb & Pinto, 2010; Stone & Maury, 2006; Tokunaga, 1993) suggests that individuals that adopt good credit behavior (e.g., the effective use of credit and money management) are more likely to use credit cards properly and less likely to become indebted, which in turn contributes to individuals' financial preparedness. Another custom that consumers should adopt is to spend less than they earn. Overall, becoming prepared for any financial default is not only about how much you earn. Ultimately, the secret of building personal financial resources lies in continually spending less than one makes (Dholakia, Tam, Yoon, & Wong, 2015).

Another question that needs to be addressed concerns the implications of these findings for financial institutions and policymakers for financial well-being. Although some part of the literature (Fernandes et al., 2014) finds that improving financial literacy explains only a small part of financial behavior, I believe that it is essential to help consumers to build awareness of the use of such financial credit services. Credit card companies and other financial institutions should inform – not only in small print at the foot of contracts, sites or invoices – but also by launching awareness campaigns that inform in detail how to use consumer credit properly. A comprehensive awareness campaign should inform and advise, for instance, that credit limits should not be considered as income, that users should keep their expenses within their budgets; that the interest rates involved when using revolving credit should be clearly disclosed, advising on situations in which it is best to use such credit, and thus that it should be used with caution. It might also involve providing clear supplemental information on daily, monthly and annual interest rates, actual examples of using revolving credit, and how this might impact consumers' debt levels, and emphasize the amount and time needed to repay the debt. Gathergood (2012) posits that consumers might benefit from having more limited access to credit, most specifically regarding high-cost credit. This is so because individuals cannot be educated on anxiety toward money nor credit limit beliefs, for instance. Therefore, the various solutions proposed to solve this issue might include restricting the credit available. However, I believe that generalizing credit restrictions could prevent

consumption on the part of trustworthy consumers. A practical implication of this study for financial institutions is, therefore, that a valid and reliable instrument should be applied to evaluate individuals' beliefs about credit limits, for instance. This kind of behavioral measure can be highly useful when determining consumers' credit limits. Hence, credit restrictions could work on the basis of a case-by-case analysis depending on the behavioral profile of each applicant. Financial institutions could benefit from this strategy by thus reducing delinquency (i.e., default rates). For instance, employing these measures as a complement to regular financial indicators and past financial history, allowing them to identify consumers with traits that lead to delinquency, and hence be more cautious in providing credit limits and credit access to them would be greatly to banks' advantage. Policymakers could also play a crucial role in this question by obliging financial institutions to employ such behavioral measures. It is clear that certain characteristics of personality can harm individuals. This is the case with the belief that credit limits may be regarded as income. In this case, the adoption of tools which helped individuals subject to this trait could prevent them from engaging in impulsive buying and building up excessive debt levels. Such tools would overall contribute to clients' financial preparedness and result in greater financial well-being.

One other implication for policymakers is the fact that, although I found no moderating effect of income, and that, though this might be good news, I emphasize that low-income individuals are more vulnerable when it comes to getting into debt, particularly credit card debt. Low-income consumers in Brazil are more vulnerable (as compared to high-income ones) when it comes to credit usage due to their restricted experience with consumer credit (Sbicca, Floriani, & Juk, 2012). Further evidence that low-income clients in Brazil are vulnerable include the data (PEIC, 2017) which show that 29.1% of the moderate-low income households (with a family income of up to 10 minimum salaries) have debt arrears, compared to 11.3% in the moderate-high income groups (with an income of 10 minimum salaries or more). Furthermore, the percentage of households that will not be able to pay their debt is 11.6% in the moderate-low income group, as opposed to 3.2% in the moderate-high income sector. These data evidence the vulnerability to which low-income consumers are subject in Brazil. Thus, the need for careful attention to this question and for public policies that inform and protect these consumers. In addition, policymakers also need to ensure that those active in the private sector are playing fair. In this regard, one urgent issue which needs to be addressed by policymakers is the high interest rates charged by the financial industry in Brazil. This is such an abnormally high figure that it has been described as

‘usury’ (Forbes, 2015). This issue needs to be addressed by policymakers immediately; there is just no justification for such high interest rates, and consumers should not have to wait any longer for rules regulating this issue.

Overall, this study sheds light on how debt and financial preparedness do not depend only on income, age, schooling or gender. Personal traits play an important role in determining destructive indebtedness and suboptimal buying behavior, which in their turn undermine individuals’ ability to cope with financial shock. The solution lies in a ‘six-handed’ effort. Institutions need to play a fair game; policymakers need to make sure businesses are not taking advantage of vulnerable consumers; and consumers need to take responsibility for their money management. Ultimately, any solution that leads to financial well-being is not only the government’s responsibility but also a shared goal of society as a whole.

6. Research Limitations and Future Research

Despite its strengths, this research has limitations that could potentially restrict the generalizability of the findings and which create opportunities for future research. First, studies conducted using self-report responses may produce a social desirability bias despite the assured anonymity of the responses. Second, sampling from online consumer panels may not be representative of the general population (Zhou & Fishbach, 2016). Online samples are potentially biased, and further bias arises from self-selection and dropouts (Kraut et al., 2004). Thus, further research could benefit from employing other methods to assess debt and financial preparedness, for example, using an experimental design or analyzing actual credit card behavior.

Future research could also replicate the model in other countries to explore cross-country and cross-cultural differences and find out if low-income consumers in economies where the offer of consumer credit is longstanding have different beliefs regarding credit limits. It could further examine other consequences of high risky indebtedness behavior and the lack of financial preparedness, such as how they affect individuals' savings and future retirement. Additionally, given that two unexpected and unexplained significant direct effects have been identified, it is suggested that further investigation be undertaken in future research into possibly omitted mediators of the relationships between credit limit beliefs and financial preparedness, and impulsive buying and financial preparedness. Finally, future studies could investigate other kinds of consumer credit, for example, booklet or credit card installment plans. This sort of consumer credit is widely used in Brazil; it allows consumers to purchase a US\$ 120.00 pair of sneakers in 10 installments of US\$ 12.00. The price includes high embedded (i.e., not evident) high-interest rates so that at the end of the day consumers pay two, three, four or five times more than the regular price of the product. There is a lack of studies on the "installment front." Only one study was found during the present study's literature review, that by Ponchio and Aranha (2008), which examined installment plans. Those authors investigated how materialism affects booklet installment usage among low-income Brazilians. To the best of my knowledge, there are no other studies investigating installment plans nor credit card installment plans or how they affect consumers' spending, debt behavior, or financial preparedness. There thus exists an opportunity for future investigation.

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Annex 1 – Table 9
Interviews Respondents' Profile

Respondents' Profile					Research Focus	Sample Feature
Gender	Name	Age	Income*	Education		
Male	Anderson	Early 50s	B1	Graduate		
Male	Theo	Late 20s	B2	Graduate		
Male	Lucas	Late 20s	B2	Graduate		
Male	David	Early 30s	A	Graduate	Produce insights that provided support to the quantitative phase of this research, most notably, to support the scales development and the questionnaire design	Convenience
Male	Patrick	Late 30s	A	Graduate		
Female	Katia	Early 40s	A	Graduate		
Male	Rodrigo	Early 30s	A	Graduate		
Male	Marcelo	Early 30s	A	Graduate		
Female	Juliana	Late 20s	C1	Graduate		
Male	Marco	Early 30s	B1	Graduate		
Male	Pedro	Late 20s	C1	Undergraduate		
Male	Daniel	Under 20s Under 20s	A	Undergraduate		
Female	Beatriz		A	Undergraduate		

Note *: See Table 2 for income classification details.
Source: the author

Annex 1 – Table 10
Focus Group Respondents' Profile

Respondents Profile - Focus Group				
Gender	Name	Age	Income*	Education
Female	Ana	Late 20s	C1	Graduate
Male	Peter	Late 20s	B2	Graduate
Male	Richard	Late 30s	C1	Graduate
Female	Adriana	Late 20s	B2	Graduate
Female	Maria	Late 30s	C2	Graduate
Female	Andrea	Late 20s	C1	Graduate
Male	Peter	Late 20s	B1	Graduate
Male	Claudio	Late 30s	A	Graduate

Note *: See Table 2 for income classification details.
Source: the author

Annex 2 - Table 11

Summary of the Constructs

Constructs	Definition
Risky Indebtedness Behavior Source: the author	Defined as a behavioral tendency of getting into debt that is revealed through repetitive debts by spending more than one can afford, producing indebtedness levels that can damage ones' life goals and/or plans.
Credit Limits Beliefs Source: an extension of Soman and Cheema (2002), and Wang, Lu, and Malhotra (2011).	Defined as consumer's belief that credit limits serves as an extension of their regular income.
Financial Preparedness for Emergency Source: the author	Defined as an individual's state of being financially prepared to cope with a financial shock)
Impulsive Buying Source: Thomas, Desai, and Seenivasan (2011)	The type of purchasing behavior that "involves getting a sudden urge to buy something without advance intention or plan and then acting on that impulse without carefully or thoroughly considering whether the purchase is consistent with one's long range goals, ideals, resolves, and plans.
Anxiety towards Money Source: Yamauchi and Templer (1982).	Is the trend to view money as a source of anguish or concern.

Source: the author

Annex 3 - Table 12
Professors, Researchers and Field Experts' Profile

Item Validation						
Participants' Profile						
Id	Gender	Name	Age	Income*	Profile	Task
1	Female	Broderick	Early 30s	A	Graduate	Sorting Task
2	Male	Pedro	Late 40s	B2	Field Expert	Sorting Task
3	Female	Suzy	Early 40s	B2	Researcher	Sorting Task
4	Male	Bodelho	Late 40s	A	Professor	English Review
5	Female	Isabel	Early 30s	B2	Researcher	English Review
6	Male	Patrick	Early 30s	A	Researcher	English Review
7	Male	Alan	Early 30s	A	Researcher	English Review
8	Female	Galhan	Early 50s	A	Researcher	Reverse Translation
9	Female	Rocha	Early 30s	B2	Researcher	Reverse Translation
10	Female	Bonomia	Early 30s	A	Professor	Overall Review of Items
11	Female	Almeida	Late 20s	B2	Researcher	Overall Review of Items
12	Male	Barros	Early 40s	A	Professor	Overall Review of Items
13	Female	Oliveira	Early 40s	B2	Professor	Overall Review of Items
14	Female	Angela	Early 30s	B2	Researcher	Overall Review of Items
15	Female	Rafaela	Late 20s	B1	Researcher	Overall Review of Items
16	Female	Geralda	Late 30s	B1	Professor	Overall Review of Items
17	Male	Edels	Early 60s	B2	Field Expert	Expert's view
18	Female	Silmara	Late 40s	A	Field Expert	Expert's view
19	Female	Barbie	Early 30s	B2	Field Expert	Expert's view
20	Female	Katia	Late 40s	A	Field Expert	Expert's view
21	Male	Ferreira	Late 20s	B2	Professor	Expert's view

Source: the author

Annex 4- Table 13
Final Scale and Questionnaire Items' Descriptive

		Items	Mean	SD	Assimetry	Kurtosis	Loading
ANX	1	I feel distressed when I have to make decisions concerning money matters - <i>Eu fico ansioso (a) quando tenho que tomar decisões envolvendo dinheiro.</i>	4.32	1.83	-0.38	-0.98	0.79
	2	I show signs of nervousness when it comes to money - <i>Sinto-me nervoso (a) quando o assunto é dinheiro.</i>	3.71	1.81	0.05	-1.15	0.87
	3	I tend to become anxious when dealing with money matters - <i>É comum que eu me sinta nervoso(a) quando eu vou tratar de assuntos referentes a dinheiro.</i>	3.89	1.87	-0.09	-1.21	0.90
	4	When I do not have enough money at the end of the month, I tend to become stressed - <i>Quando eu não tenho dinheiro suficiente no final do mês. eu me sinto ansioso(a).</i>	4.84	1.86	-0.72	-0.62	0.57
CLB	5	I see credit limits as part of my regular income - <i>Eu vejo meus limites de credito como parte da minha renda.</i>	2.84	1.97	0.73	-0.90	0.83
	6	I add my credit limits to my budget as if they were part of my regular income - <i>Eu adiciono meus limites de crédito ao meu orçamento como se fossem parte da minha renda.</i>	2.53	1.83	1.05	-0.15	0.92
	7	My credit limits serve as part of my regular income - <i>Meus limites de crédito fazem parte da minha renda.</i>	2.65	1.88	0.92	-0.49	0.91
	8	When I am planning my budget, I consider my credit limits to an extra cash (i.e., cash buffer) - <i>Quando planejo meu orçamento futuro sempre considero meus limites de crédito como dinheiro extra.</i>	2.58	1.78	0.96	-0.27	0.72
IMP	9	"Buy now, think about it later" describes me - <i>A frase "compro agora e reflito depois" me descreve.</i>	2.41	1.66	1.12	0.23	0.84
	10	"Just do it" describes the way I buy things - <i>A frase "eu simplesmente faço, sem pensar" me descreve.</i>	2.20	1.51	1.41	1.30	0.85
	11	"I see it, I buy it" describes me - <i>A frase eu vejo, eu compro" me descreve muito bem.</i>	2.28	1.55	1.35	1.07	0.79
	12	I find myself sometimes buying things in a irrational manner - <i>Às vezes me vejo comprando de forma irracional.</i>	2.94	1.81	0.63	-0.85	0.64
RIB	13	I am often in debt to much more than I can pay - <i>Faço dívidas em valores maiores do que posso pagar.</i>	2.62	1.80	0.90	-0.44	0.72
	14	I often have to pay fines (or interests) for paying overdue bills - <i>Com frequência eu pago multas (ou juros) por atrasos no pagamento dos meus compromissos.</i>	2.75	1.85	0.74	-0.75	0.66
	15	I often borrow money to pay off my debts - <i>Frequentemente faço novos empréstimos para pagar dívidas.</i>	2.14	1.61	1.44	1.03	0.70
FPS	16	I am often in debt to much more than my monthly income - <i>Estou sempre endividado com valores muito maiores do que ganho.</i>	2.45	1.68	1.11	0.22	0.84
	17	My debts damages my life goals, such as, saving money, investing in education or in buying my own home - <i>Minhas dívidas prejudicam meus objetivos de vida, como, por exemplo, poupar, investir em educação ou na compra da casa própria.</i>	3.66	2.06	0.16	-1.35	0.66
	18	If I loose my job today, I have enough money to cope with my expenses until I find my next job. <i>Se eu perder meu emprego hoje, eu tenho reservas suficientes para arcar com minhas despesas até encontrar um novo trabalho.</i>	3.81	2.04	-0.00	-1.37	0.73
	19	Very often, my monthly income allows me to fair amount of money at the end of the month. <i>Frequentemente sobra dinheiro do meu salário no final do mês.</i>	3.95	1.88	-0.07	-1.19	0.79
	20	I am able to cope with financial emergencies expenses - <i>Eu tenho sempre como arcar com emergências financeiras que me acontecem.</i>	4.27	1.80	-0.31	-0.98	0.58
The items below encompassed the Final Questionnaire, but were excluded as described in section 5.1							
RIB	21	I am frequently in debt - <i>Eu faço dívidas com frequência.</i>	2.82	1.73	0.70	-0.67	0.73
IMP	22	Very often, I find myself buying things I do not need - <i>frequentemente eu gasto com coisas que não preciso.</i>	3.34	1.78	0.31	-.07	0.60

Source: the author

Annex 5 - Table 14

Anxiety Towards Money – Original Scale - EFA Results

Anxiety Toward Money (Yamauchi and Templer, 1982)	Component	
KMO: 0.529	1	2
Total Variance Explained (%):	27,14	25,31
Items	Loadings	
I show signs of nervousness when it comes to money - <i>Sinto-me nervoso (a) quando o assunto é dinheiro.</i>	,871	,065
I show worrisome behavior when it comes to money - <i>Quando o assunto é dinheiro eu tendo a ficar preocupado (a).</i>	,257	,488
I worry that I will not be financially secure - <i>Eu me preocupo com a possibilidade de não ter segurança financeira no futuro.</i>	,105	,708
I spend money to make myself feel better - <i>Eu gasto dinheiro para me sentir bem.</i>	,885	-,009
I am bothered when I have to pass up a sale - <i>Eu fico aborrecido (a) quando eu deixo passar uma promoção sem comprar.</i>	-,089	,490
It's hard for me to pass up a bargain - <i>Tenho muita dificuldade de resistir a uma boa pechincha.</i>	-,035	,731

Note: these results stemmed from pre-test 1, as described in Table 2.

Source: the author

Annex 5 - Table 15

Impulsive Buying Scale

Impulsive Buying Scale (source: Rook and Fisher, 1995)	
Original Scale Items	Final Scale Items
"Buy now, think about it later" describes me.	"Buy now, think about it later" describes me - <i>A frase "compro agora e reflito depois" me descreve.</i>
"Just do it" describes the way I buy things.	"Just do it" describes the way I buy things - <i>A frase "eu simplesmente faço, sem pensar" me descreve.</i>
"I see it, I buy it" describes me.	"I see it, I buy it" describes me - <i>A frase eu vejo, eu compro" me descreve muito bem.</i>
I often buy things without thinking.	I find myself sometimes buying things in a irrational manner - <i>Às vezes me vejo comprando de forma irracional.</i>
I often buy things spontaneously.	
Sometimes I feel like buying things on the spur of the moment.	
I buy things according to how I feel at the moment.	
I carefully plan most of my purchases.	
Sometimes I am a bit reckless about what I buy.	

Source: the author

Annex 6 – Table 16**Propensity for Indebtedness Scale**

Propensity for Indebtedness Scale, Flores and Vieira 2014

It is not correct to spend more money than I make.

It is better to gather money first and then spend it.

I know exactly how much I owe in stores, in credit cards, or to the bank.

I think it is normal for people to be in debt to pay their bills.

I would rather buy in installments than to wait to gather money to buy in cash.

It is important to know how to control the expenses in my house.

I would rather pay in installments even if the total is more expensive.

People would be disappointed with me if they knew I had a debt.

There is no problem to have a debt if I know I can pay it.

Source: the author

Annex 6 – Table 17**Credit Card Company Profile**

Income		Distribution by Region	
	%		%
A	0.1%	North	0.005
B1	0.14	Northeastern	99.98
B2	1.30	South	0.001
C1-C2	4.58	Southeastern	0.012
D	59.29	Centereastern	0.002
E	34.6		
		Gender	%
		Female	75.04
		Male	24.96

Source: the author

Annex 6 – Table 18**Fintech Company Profile**

Income		Distribution by Region	
	%		%
A	9.13%	North	3.59
B1	7.31	Northeaster	11.2
B2	17.06	South	13.01
C1-C2	14.1	Southeaster	63.49
D	21.2	Centereaste	8.72
E	30.0		
		Gender	%
		Female	35.0
		Male	65.0

Source: the author

Annex 6 – Table 19**Vidi Online Panel Company Profile**

VIDI PROFILE			
Income		Distribution by Region	
	%		%
A	16.0%	North	6.0
B1	28.0	Northeastern	14.0
B2	32.0	South	17.0
C1-C2	23.0	Southeastern	55.0
D	1.0	Centereastern	8.0
E	0.0		
		Gender	%
		Female	37.0

Source: the author

Annex 7 – Table 22
Moderation Outputs

Variable	<i>Schooling</i>	<i>Age</i>	<i>Gender</i>
Model	<i>P</i>	<i>P</i>	<i>P</i>
Anxiety -> Impulsive Buying	0.320	0.870	0.320
Anxiety -> Risky Indebt	0.489	0.706	0.609
Credit Limit -> Impulsive Buying	0.856	0.166	0.308
Credit Limit -> Risky Indebt	0.133	0.273	0.299
Impulsive Buying -> Risky Indebt	0.674	0.767	0.493
Risky Indebt -> Financial Preparedness	0.129	0.145	0.645

Source: the author